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THE RAILWAY GAZETTE
33, TOTHILL STREET, WESTMINSTER, S.W.1

T.U.C. Appeal to Unions

LAST week we referred briefly to the special meeting of the Confederation of Shipbuilding & Engineering Unions on November 10 to consider the claim for a wage increase of £1 a week which would probably cost industry something like £100 million a year. Little information was forthcoming except that a joint conference was expected to take place in London later in the month and that there had been severe criticism at the meeting of the procedure adopted by the employers in suggesting that the unions should withdraw their claims until a more appropriate time. Though a number of unions affiliated to the Confederation are said to be in favour of withdrawal of claims for the time being, there is little chance of the A.E.U. agreeing to this course. On November 14, the special economic committee of the T.U.C., whose agreement on a wages policy on "broad lines" after prolonged talks was reported in these pages last week, after a talk with Ministers lasting several hours, appealed to all unions concerned in the present wage claims to postpone negotiations until the General Council of the T.U.C. had issued a full statement on the position. Discussion at this meeting was largely concerned with action that might be taken to ensure the success of efforts being made to avoid inflation and a consideration of the problems arising from the T.U.C. examination of the union wages policy.

* * * *

Public Supervision of the Steel Industry

When the Iron & Steel Board was dissolved on March 31, 1949, there came to an end an experiment of some significance to British industry. When this Board started to function nearly three years ago, there was reason to believe that it might become permanent if a success, but, though its success as an impartial advisory body representing all parties was clearly shown, during the last quarter of 1948 the Government decided to introduce its Bill to nationalise the steel industry. How the functions of the Board might be fulfilled under the provisions of the Iron & Steel Bill forms the subject of an article in the *Monthly Statistical Bulletin* of the British Iron & Steel Federation for October. This article supports the view that, in those industries already nationalised, public ownership has not brought with it public control, and that, because an industry under the State has no competitor, there is no standard whereby efficiency can be judged. Moreover, when an industry in financial difficulties could draw on the resources of the State, there was no spur or prod to efficient working. Neither could a Government easily reconcile its interest in the ownership of an industry with its duty to the consumer. Finally, the presence of a trade union leader on the Board of a State undertaking, with his resulting association with the owner's point of view, placed a strain on union discipline which had been the cause of not a few unofficial strikes.

* * * *

Southampton Docks Development

At a luncheon given in his honour by the Southampton Chamber of Commerce on November 9, Mr. R. P. Biddle, Docks & Marine Manager, Southampton, talked of the progress made at the Docks in the past 47 years, during which the number of ships and the tonnage handled has more than doubled. Mr. Biddle went to Southampton from Jersey in 1907 and in that year the liner *Adriatic* docked with 1,000 passengers to inaugurate the White Star Line service. When it was announced that the White Star Line intended to transfer to Southampton the former London & South Western Railway decided to build what is known as Ocean Dock. Now under construction at Ocean Dock by the Southern Region of British Railways is a new passenger terminal which—as was reported in our issue of November 11—is expected to be completed in time to handle the tourist traffic in the *Queen Mary* and the *Queen Elizabeth* from the U.S.A. in 1950. When one considers the progress made between two world wars in which Southampton played a prominent part, suffering also severe damage, much credit is due to all interests associated with the activities of the Docks. Mr. Biddle said that, although the Docks were no longer run by private enterprise, there was still an *esprit de corps* in dockland under nationalisation which in his experience was quite unique.

British Transport Commercial Advertising

Mr. J. H. Brebner, Chief Public Relations & Publicity Officer of the British Transport Commission, who is the only non-Scandinavian guest at the Swedish Advertisers' Association 25th anniversary conference, read an address on advertising and public relations, on November 16. Referring to the British Transport Commission, Mr. Brebner said that the practice was for the Chief Public Relations & Publicity Officer to deal with public relations at headquarters level and also to co-ordinate and supervise this work throughout the undertaking. To foster the transport advertising medium, and provide a better service for national advertisers, the control of letting commercial advertising space on the properties of all Executives had been centralised. The Commercial Advertisement Division controlled almost a million advertising sites and the gross advertising receipts from these sources in 1948 amounted to approximately £3,000,000, and the net receipts after deduction of working expenses was almost £2,250,000; these were figures which would increase as additional undertakings were acquired. A good deal of progress had been made by newspaper and periodical publishers in Britain in the production of statistical surveys on circulation and readership; the first instalment of his department's work in this direction would be appearing early next year. It would be the London Travel Survey, and it would give a great deal of information as to the composition of the public to whom transport advertising was addressed.

* * * *

Luggage Lockers on British Railways

The introduction this week to the British travelling public at Euston Station, London Midland Region, of luggage lockers, provides a welcome facility and is an indication of the readiness of British Railways to experiment and to adapt to British requirements facilities already proved successful in other countries. Some railways in U.S.A. provide lockers of different sizes in their stations. The new lockers, which are referred to in our news pages this week, were built to the order of the London Midland Region. They are surprisingly capacious; for sixpence the passenger can with a minimum of inconvenience ensure complete security for several belongings which together would cost considerably more if lodged in the cloakroom in the ordinary way. They will be a boon to the tired shopper and save time for the hurried traveller unwilling to call, or even at peak traffic periods to queue, at the left luggage office. They will economise, despite the complexity of the checking procedure, in supervisory staff, and at the same time make a useful contribution to revenue.

* * * *

Diesel Locomotive Crews

Early this year a threatened strike of diesel enginemen in the United States, which formed the subject of an editorial note in our May 20 issue, was averted by the action of President Truman in appointing a fact-finding board to go into the dispute. Briefly, the two principal unions of locomotive enginemen had demanded from the railways that all diesel locomotives used on road service, *i.e.*, locomotives other than shunters, must carry an additional driver and an additional fireman respectively, because of work that had to be done in the engine-room in the course of the journey. Admission of any such claim would have had a damaging effect on U.S.A. diesel development, as any economies effected by the change-over from steam to diesel power would have been far exceeded by the duplication of labour costs. The weight of evidence was so completely contrary to the union claims, however, that denial of both was inevitable. No proof was forthcoming that accidents had increased as a result of firemen leaving the head end of diesel-hauled trains to attend to duties in the engine-room. It was shown that the additional men would have neither work nor responsibility to justify their presence on the locomotives and might well be a distraction rather than a safeguard. It was argued, moreover, that, even though the heavy loading and high speeds of diesel traction might put more responsibility on engine crews, they, in their turn, had gained immeasurably in the comfort of their working conditions as a result of the change-over from steam to diesel power.

* * * *

Incentive to Improvement in Constructional Methods

For the reason that British industry is today being urged as never before to follow American lead in the improvement of construction and other production methods it is appropriate to mention a form of stimulus offered in the United States to encourage such improvement. For the second year in succession, the James F. Lincoln Arc Welding Foundation is promoting an open competition to foster the building of better bridges at lower cost. Prizes to an aggregate value of $10,750 are offered for the best designs for a 250-ft. all-welded steel two-lane through highway bridge span. Only the type of steel and loading conditions of the bridge are specified, and any designer or engineer who cares to compete is encouraged to develop new design concepts, using new steel shapes, new fabricating and erecting methods, and to suggest changes in existing specifications so long as they conform to sound practical engineering practice. The competition is open to all from November 1, 1949, to June 30, 1950; particulars of the competition are available from the Secretary to the Foundation, Cleveland, 1, Ohio, U.S.A.

* * * *

London Transport Instruction Train

In the near future London Transport will place in service an instruction train for the Rolling Stock Division of the Chief Mechanical Engineer (Railways). This train, which is illustrated and described in other pages this week, consists of five cars converted from tube trailer cars built in 1919, recently withdrawn to be scrapped. The interior of each car has been entirely reconstructed and contains the various types of equipment in use. Among the equipment provided is a lecture room, fitted with tiered seating for twelve students, together with an epidiascope. Other cars contain three complete sets of traction control equipment, each of a different type in common use, Westinghouse and electro-pneumatic brake apparatus, automatic coupler, and a pair of pneumatically operated doors. Additional lecturing aids are provided by wiring and other diagrams. It is proposed to institute appropriate courses for all grades of the rolling stock maintenance staff and priority will be given in the early stages to carriage cleaners and examiners. Each course will cover several sessions, depending on the subjects covered, each session lasting two hours. The instruction train will travel to the various depots and lectures will be given during normal working hours. The train was designed, and the work of converting the cars was carried out, entirely by staff in the department of the Chief Mechanical Engineer (Railways) under the direction of the Chief Mechanical Engineer, Mr. W. S. Graff-Baker.

* * * *

Modern Docking Pits at St. Albans Garage

London Transport engineers have evolved a new design of major docking pit for use in all future garages. The first of this design has been installed at St. Albans garage in view of the number of "Q" type side-engine and "TF" under-floor engine vehicles which are maintained there, the new design of pit being particularly suitable to the handling of side and under-floor engines, as well as the usual forward types. One of the features in the new design is a central communicating trench which has increased the amount of natural lighting considerably, as well as giving the operatives a much greater area to work in. Artificial light is supplied by fluorescent tubes in aluminium housings, and incorporate armoured plate glass, the housings being gas and flame-proof. The walls of the pits and trenches are finished in oil-resisting white glaze tiling, and where the concrete surface is exposed at high level, the surface has been coated with an oil-resisting enamel. The centre trenches of the pits carry a lightweight hinged bridge which is easily removable after the vehicle has been driven to its repair position. Installed lifting jacks are oil-operated, and the platforms when not in use are flush with the floor. Further reference to this subject will be made in a later issue.

Taking a Chance

Lt-Colonel G. R. S. Wilson's report on the collision at Glasgow Cross on January 31, 1949, summarised in this issue, shows that no error was made in the block working and that the driver, who failed to see several signals, took a chance that all was right for him, and continued. The inquiry revealed an extraordinarily unsatisfactory state of affairs as regards the maintenance of the signal lamps, not only on the tunnel section concerned but elsewhere, as a footplate inspection showed. Admittedly the difficulties on an underground line worked by steam are considerable, but when one considers that the Metropolitan and District lines managed to work successfully a much denser traffic, with many signals in the tunnels acting as block section or acceptance signals, and to give good lights in them all the time, surely it ought not to be beyond present-day resources to do at least as well, if not much better.

* * * *

Chesapeake & Ohio Railway 2-6-6-6 Locomotives

Towards the end of 1948, a number of dynamometer-car tests was made with the Chesapeake & Ohio Railway "H8" class Mallet locomotives, to determine their performance in heavy coal traffic, between Russell, Kentucky, and Toledo, Ohio, a distance of 230·5 miles. On another page of this issue, further reference is made to these trials, which involved one of the latest series of 2-6-6-6 locomotives, built by the Lima Locomotive Works and delivered to the C. & O. in November, 1948. At present, there are 60 of the "H8" class Mallets in service, the last fifteen of which differ slightly in the arrangement and number of the flues and tubes. The class was introduced in 1941 to supplement the work done by the 2-8-8-2 Mallets and the 2-10-4 and 2-8-4 engines and was notable for its high boiler-capacity; the grate area was a noteworthy feature and amounted to 135·2 sq. ft. Although designed for maximum speeds of 60 m.p.h., the main objective of the design was the development of maximum powers at speeds of from 30 to 35 m.p.h. Because of the higher speeds envisaged, however, the driving wheels were 5 ft. 7 in. dia., as compared with 4 ft. 9 in. for the simple-expansion 2-8-8-2 Mallets introduced in 1924.

* * * *

South Australian Railways

THE report for the year ended June 30, 1948, of the South Australian Railways Commissioner, Mr. R. H. Chapman, records an increased deficit caused by continued increases in costs of labour (140 per cent. since 1936) and materials, without any increase in rates, which averaged only 20 per cent. in excess of those of 1905. Governmental permission to raise rates was not given, despite the recommendations of the Railways Commissioner. Further difficulties were poor New South Wales coal, lack of vital materials, and shortage of operating staff. Record tonnages, nevertheless, were handled.

The following are some of the principal results:—

	1946-47	1947-48
	(thousands)	
Total train mileage	6,010	6,134
Passenger journeys	19,827	19,067
Goods gross tonnage	3,240	3,585
	(£ thousands)	
Coaching receipts	1,276	1,295
Goods receipts	2,966	3,402
Total receipts	4,622	5,110
Total working expenses	4,949	5,856
Deficit (incl. interest)	1,612	2,026

A rolling stock construction programme put in hand included new coaches for the "Overland Express," running between Adelaide and Melbourne, in conjunction with the Victorian Railways; the sleeping cars are air-conditioned and incorporate single-berth roomettes. For inter-state goods traffic with the New South Wales Government Railways *via* the break-of-gauge stations at Terowie and Broken Hill, special five to six ton containers were designed.

Ten 1,500-h.p. diesel-electric locomotives were ordered from U.S.A. for working goods trains over the heavily graded section of the Adelaide-Melbourne main line between Mile End (Adelaide) and Tailem Bend, as well as on the "Overland." Acceleration of goods trains resulting from diesel-electric traction was expected to facilitate interspersal of goods with passenger trains, with consequent increase of line capacity and postponement of duplication. In addition, 21 sets of diesel engines and equipment were ordered, to replace existing railcar engines; remote control would allow of multiple-unit working of railcars with varying numbers of trailers.

Work proceeded throughout the year on widening the 3 ft. 6 in. to standard (5 ft. 3 in.) gauge between Wolseley and Millicent, but was retarded by labour shortage. Regarding conversion to 4 ft. 8½ in., the standard Australian gauge, the position remained unchanged, as the parliaments of the States concerned had not enacted the necessary legislation. Proposals for electrification and extension of the Adelaide suburban lines were submitted to the Government of South Australia and to the Royal Commission on State Transport Services; the proposals are strongly supported by the Railways Commissioner, who urges early action in view of delays inherent in land purchase and of increased costs of purchase.

* * * *

New Chief Regional Officers

AT the end of this year Mr. G. L. Darbyshire, who is at present Chief Regional Officer of the London Midland Region, British Railways, is to retire. Mr. Darbyshire has had a distinguished career since he joined the London & North Western Railway at Crewe in 1898. For a good many years he has been closely associated with labour matters, and in 1930 he was designated Chief Officer for Labour & Establishment of the former London Midland & Scottish Railway. It may be true to say of Mr. Darbyshire that that designation has tended to cramp a full appreciation of his abilities, for his interests and knowledge have been far wider and his influence has been greater, than would appear from the title he held until he became a Vice-President of the L.M.S.R. in 1943. Some indication of the fact that his broader capabilities had not passed unnoticed was given in 1947, when he became Acting President of the L.M.S.R., and Chief Regional Officer of the London Midland Region when it was formed in 1948.

As will be seen from our Personal pages, the Railway Executive has taken the opportunity afforded by the retirement of Mr. Darbyshire to bring about a general reshuffle of personalities among Chief Regional Officers in three of the Regions. Mr. John Elliot, who formerly has been very closely associated with the Southern Region since he joined the Southern Railway at the beginning of 1925, is to succeed Mr. Darbyshire at Euston. Mr. C. P. Hopkins, who was the first Chief Regional Officer of the North Eastern Region when it was formed in January, 1948, and who had been on the old L.N.E.R. or its constituents since he entered the railway service in 1916, succeeds Mr. Elliot at Waterloo. Mr. H. A. Short, who joined the former London & South Western Railway in 1913, and has become known as a Southern Railway, and latterly, Railway Executive officer, goes to York in place of Mr. Hopkins.

This re-arrangement is the first occasion on which major transfers have been made between one Region and another of senior railway officers since nationalisation. Of the officers involved, apart from Mr. Darbyshire who is retiring, Mr. John Elliot alone has attained the rank of Deputy General Manager or Acting General Manager before the passing of the Transport Act, 1947. He, and Mr. K. W. C. Grand, now Chief Regional Officer, Western Region, are the last two representatives, in effect, of the pre-nationalisation officers who, in the ordinary course of events would have looked forward to General Managerships. The fact that it is now possible to transfer a Chief Regional Officer from an essentially passenger line, such as the Southern, to one concerned largely with goods and mineral traffic, such as the Midland, may be deemed one of the first fruits of nationalisation. Similar considerations apply in the case of the transfers of Mr. Hopkins and Mr. Short.

There is much to be said for the transfer of officers at this level between Regions. If one accepts the essential idea behind the Transport Act—that British Railways on the whole should be unified—there is good reason for moving officers from one Region to another. The effect must be not only to give the Regions the benefit of the wider experience of the officer, but also the officer a greater understanding of railway problems as a whole. Presumably this greater knowledge and experience will fit him for even broader authority in the future. The work of the Chief Regional Officer, especially under the present organisation of British Railways, is largely administrative, and

he is therefore not concerned to the same degree as a departmental chief with the day to day detail of the working of the railway.

It is in this factor, perhaps, that lies the basis which must determine the desirability of inter-Regional transfers of railway staff. In his earlier years there is everything to be said in favour of giving the young railwayman as wide an experience and working knowledge of railway operation as is possible. To achieve this the transfer of junior railway officers from one Region to another has much to commend it. There comes a time, however, in the career of a railway officer when his efficiency must depend very largely on his detailed knowledge of a particular system. If at that time he has reached a point within a few years of his retirement, little useful purpose can be served by moving him to another Region in which completely dissimilar conditions prevail. The best he can do then with the time at his disposal is to inspire subordinates with some of the enthusiasm which has stood him in good stead in his previous appointment.

If it is deemed desirable to incorporate into a Region certain characteristics which are peculiar to, or in greater evidence in, another Region, a more promising line of action might be to transfer from the first to the second an officer as a deputy to the chief officer in the department concerned. That would give a greater period for the exercise and bringing to fruition of transplanted principles. The movement of principal departmental officers is likely to be attended by too short a tenure of office to achieve the desired results.

The transfer of Chief Regional Officers, however, is in a different category. These officers, necessarily, have become not only the leaders and fountain heads of Regional loyalties, but have also had to keep in mind the well-being and ultimate objectives of British Railways as a whole. Their general knowledge of railway administration has been broadened by contact in committee with their brother officers in similar positions, and by their direct contact with the Railway Executive. The transfer of officers of this grade, therefore, would seem to mark the attainment of a definite stage in the organisation of British Railways.

* * * *

Economic Realism and Incentives

SOME outspoken comments on Government industrial policy were made by Lord McGowan, Chairman of Imperial Chemical Industries, at the first of a series of meetings in support of free enterprise organised by the National Union of Manufacturers at Birmingham on November 10. Lord McGowan maintained that, although national planning since the war had possibly made some contribution to orderly arrangement and progress, much of that planning had been overlaid by false doctrine which had led to frustration and excessive interference in detail. Such a policy, if persisted in, would bring disaster to our economic life, stifling the spirit of enterprise and adventure which had served the country well in former years. For the State to take over manufacturing industries with overseas connections would be a fatal step. Moreover, the present high level of taxation discouraged work, killed incentive on all sides, and kept the level of production much lower than it might have been.

Lord McGowan then referred to the loose thinking about wages and wage levels prevalent today and commented on the publicity given to minimum wage rates which distracted attention from the more important factor of weekly earnings. In this connection he quoted the case of grade 2 porters on British Railways who, though their wage rate is only 92s. 6d. a week, actually are in receipt of weekly earnings of 112s. 7d. More and more in current wage discussions there was to be found a predominance of humanitarian motives over economic realism. What the country needed today was not so much a wage structure guaranteeing a certain standard of living, but a wage policy of incentives and sanctions which would encourage the industrious and penalise the idle. The true solution of the problem was to obtain greater production from existing hours of work by greater effort rather than to work longer hours. Speaking on the relationship between wages, profits, and dividends, Lord McGowan quoted figures showing how the national wages bill had risen from £1,737 million in 1938 to £3,975 million last year—an increase of 129 per cent.—and how dividends had risen much less steeply; distributed company profits increased from £506 million in 1938 to £730 million in 1948—a rise of 44 per cent. Published statistics hardly revealed a picture of shareholders growing rich at the expense of other income earners.

* * * *

East African Railways & Harbours

THE report for the year ended December 31, 1948, which has been sent to us by Mr. A. Dalton, General Manager of East African Railways & Harbours, is the first to be issued since the amalgamation on May 1, 1948, of the Kenya & Uganda Railways & Harbours Administration and the Tanganyika Railways & Ports Services. The difficulties inherent in the fusion of any two large transport undertakings were aggravated by the abnormal circumstances of delayed post-war rehabilitation, of rapidly increasing traffics, and of the "groundnuts scheme." Although fusion of the systems progressed well, it was only by the end of 1948 that the new organisation began to take shape; for some months it was necessary to operate either component virtually as a separate railway, which is reflected in the two separate parts of the report, for the Kenya-Uganda Section and for the Tanganyika Section, either part being complete with the statistics proper to the section concerned, and both being preceded by some brief remarks on the E.A.R. & H. as a whole.

Both sections broke traffic records, and successfully handled greatly increased tonnages of goods with a relatively small increase in motive power and rolling stock; this was done only through improvement in operating methods and a high level of engine performance and availability resulting in more intensive use of rolling stock.

At both the major ports, Dar-es-Salaam and Mombasa, congestion was experienced, at the former not only through the groundnuts scheme, but also through an increase in imports to the Belgian Congo; and at the latter mainly through uneven flow of traffic combined with a shortage of locomotive coal resulting in curtailment of train services. A Ports Department was set up for the whole system. The increase in passenger traffic was mainly in the third class, the number of passengers being three times that of 1939; this is attributed largely to the increased prosperity of the African.

The rates in force at the end of the year under review were those of 1939. The impact of the enormous rise in world prices had begun to be felt in the cost of replacements; so far, however, the burden of increased costs had been taken up by increased traffic density, which allowed standing charges to be spread over a larger number of units, and by an increase in the proportion conveyed of higher-rated imported commodities. A review of tariffs is now in progress, and has been given an impetus by the implementation of the recommendations of a recent salaries commission.

The following are the more important results:—

	Kenya-Uganda Section		Tanganyika Section	
	1947	1948	1947	1948
Railways and steamships		(thousands)		
Total train mileage	4,303	4,650	1,237	1,492
Passenger journeys	2,999	3,308	1,397	1,731
Goods ton-miles	696,130	754,275	108,724	135,059
		(£ thousands)		
Coaching receipts	716	819	318	382
Goods receipts	3,826	4,439	985	1,247
Total receipts	4,679	5,427	1,349	1,685
Working expenses	3,209	3,881	710	970
Harbours—				
Receipts	1,040	1,341	329	394
Expenditure	469	632	287	410

On the Kenya-Uganda Section, increase in upper class passenger traffic is attributed in part to increased movement of European settlers and officials and of European children to and from boarding schools. The increase in goods traffic was spread over all classes of freight except export traffic, which declined largely as a result of poor cotton and maize crops; military traffic was double that of 1947, due to the establishment of the Mackinnon Road Stores Depot, to which large quantities of stores were transferred from the Middle East. Work proceeded with realignment of the track between Nairobi and Nakuru to ease the existing 1 in 50 gradients. Eighty-seven locomotives were converted to burn oil fuel, out of 108 planned in the first conversion programme.

On the Tanganyika Section, the ports of Lindi and Mikindani

proper were developed with temporary works to handle traffic mainly arising from the groundnuts scheme, pending completion of a deep-water quay at Mtwara (Mto Mwara), near Mikindani. During the early part of 1948 it was not possible for the railway to clear all the imported goods on offer at Dar-es-Salaam, but as wagons obtained from military sources in the Middle East were repaired and brought into use, it became possible to clear the back-log by July. Further delays at Dar-es-Salaam were due to causes already mentioned; the port was severely taxed for most of the year, the situation being aggravated by the unsettled state of the port labour. The Kongwa branch, 17 miles long, was extended 20 miles into the area under development by the Overseas Food Corporation, to Hogoro; work continued on the Southern Province line, which reached a point some 80 miles from the coast, and a survey was completed of the line to link the existing Southern Province line with the new port of Mtwara. A record volume of traffic was handled for the fourth year in succession; the increase was attributed to the activities of the Overseas Food Corporation, to increased transit traffic (*via* Kigoma and Lake Tanganyika) to the Belgian Congo, and to increased local movement.

* * * *

Planned Railway Development in the Soviet Union

THE third Russian Five-Year Plan (1946-1950) envisages a capital expenditure of 50,000 million roubles on the development of all forms of transport. This is about 16 per cent. of all capital investments proposed by the Plan. Some 40,000 million roubles will be for the building of new lines alone, and of this total about 55 per cent. was spent in the first two years of the Plan. New lines were developed mainly to safeguard the political and military predominance of the Soviet Union in south-eastern and eastern Europe.

Efficient lines of communication in the south-west were therefore considered of paramount importance for the national security, and a main line, known as the "south-western magistral" has come into being (partly by incorporating sections of existing lines) which, taking advantage of the succeeding depressions in south-western Ukraine and in the lowlands of eastern Poland (now within the Russian borders) runs as far as southern Poland. Constructional difficulties of major importance are reported to have been encountered only in the region of the upper Dvina river east of the former Latvian frontier.

With this important route well under way, attention turned anew to the reconstruction of the lines in the Donbas region (eastern Ukraine) wrecked by the Germans, and the development of new lines in western and southern Siberia. In southern Siberia, the "South Siberian Magistral" is to parallel the original trans-Siberian line. The building of this main line was mentioned in *The Railway Gazette* for August 22, 1947.

The Russian railway map published in our issue for May 25, 1945, shows the location of this line as proposed at that time. Also in south-western Asia, the Mointy—Chu line, skirting in part the western section of the Balkash Lake, was completed. Thus, an alternative connection between eastern Russia and the regions bordering on Afghanistan, India and south-westernmost China was brought into being. In addition, the line greatly facilitates the conveyance of the various non-ferrous metal ores, in the main copper, to the concentration of metallurgical industries in the southern Urals. This line also was shown on that map.

In the southern Urals, the Ishimbay-Jermolajevo line, mentioned in *The Railway Gazette* for September 24, 1948, was opened to traffic. In all the programme for Russian south-west Asia comprises some 4,350 route-miles of new lines, partly already realised, partly building and partly still on paper. It is believed that about a third of this total is double track.

Important lines were completed before the end of the war. Outstanding among these was the Petchora line in north-eastern Russia which eventually reached Khabarova, on the Russia Arctic coast. It was mainly to develop the great coal deposits of those regions bordering on the northern Urals (after the temporary loss of the Donbas coal regions in the south). The location of the line will be found in the Russian railway map published in our issue of December 10, 1943.

By the end of 1945, the Russian railway system measured approximately 66,447 route-miles, about 30 per cent. double-track, and with only comparatively few and short sections electrified. This compared with about 50,300 route-miles at the end of the civil war in 1922. By the end of 1935, the total was 52,600 route-miles. A further 620 route-miles were completed by the end of 1938, when the total route-mileage of 53,220 corresponded to four miles only per 100 sq. miles and to three miles per 10,000 inhabitants.

In addition to new lines built, the further increase of the Russian railway system before 1945, was brought about partly by the incorporation of the Baltic countries, eastern Poland, eastern Czechoslovakia, part of north-eastern Hungary, and northern Roumania, with a further few lines in the region of the Danube delta.

Contrary to its slow development before the war, electrification has spread rapidly since. All lines radiating from Moscow and the mountain lines in the Urals and in Transcaucasia are to be gradually electrified for some distance. The progress made has been variously outlined in our issues of November 14, 1947, April 4, 23, 1948, September 24, 1948, November 12, 1948, January 7, 1949, January 28, 1949, and April 22, 1949.

Despite the considerable increase of the last 10 to 15 years, the Russian railway system is far from adequate for the country's needs. The planned concentration of industries in areas which have most of natural riches is a drawback when breakdowns occur on the railway. Harvest traffic is stated to disorganise the regular flow of the industrial traffic. The considerable distances between centres of industrial and agricultural production are, however, an outstanding advantage from the financial point of view in that road competition hardly exists, except, and even then to a limited extent, in the areas immediately adjoining production centres. The stimulus which the great distances have given to the development of air services has not resulted in a dangerous competition, nor is inland shipping a serious competitor of the railways, which still enjoy undisputed monopoly for long-distance transport.

The table below illustrates the astonishing growth of goods traffic in the Soviet Union in the last two decades.

	Tonnes-km. (million)
1928	93,400
1933	169,500
1945	259,000
1950 (planned)	532,000

There is a great shortage of locomotives and rolling stock; 15,800 steam locomotives are said to have been lost during the war. The 1946-1950 Plan provides for the building of 2,200 steam, 220 electric, and some 300 diesel locomotives, and the incorporation of the territories in Eastern Europe meant also the acquisition of locomotives and rolling stock. Important additions were made also as "war booty," though exact numbers are not available.

Losses of goods wagons during the war have been estimated at 428,000, about 35 per cent may see service again after heavy repairs, and many have already been restored to traffic. The Five-Year-Plan includes 146,000 new wagons, of which many are high-capacity bogie wagons. By the end of 1950 2,600 passenger coaches only will have been added to the heavily-depleted stock.

One of the main efforts made to cope with the excessive demands from industry and agriculture has been directed towards the reduction of turn-round times. These have been described by the Minister for Transport as one of the "inner resources" of which the railways are bound to take advantage in their intensifying "battle on the rails." The drive for shorter turn-round times was introduced by the issue of new loading and unloading regulations, and competitions between the goods handling teams of the various stations are continuously being arranged. Similar regulations cover locomotive crews, who always keep to the same engine, to encourage them to keep their locomotive in good repair, save fuel and lubricating materials and by careful handling to extend the periods between overhauls. Good timekeeping and, within limits, maintaining higher speeds than scheduled, are points specially emphasised by the new regulations. Locomotive breakdowns on the main line may involve the crews concerned in an action for "sabotage."

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

North Kent—Brighton Service

Ormiston Hotel, Oak Lane,
Sevenoaks. October 14

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—For some time efforts have been made to persuade the Operating Department at Waterloo to modernise and improve the train service between North Kent and Brighton over the important Tonbridge-Lewes line. But the intransigence of the officials is driving away would-be passengers to and from the coast. At long last the 10.30 a.m. from Tunbridge Wells West has been made to start from Tonbridge, but as early as 9.55 a.m. with an 18-minute wait at Tunbridge Wells West, taking 103 min. for the 38 miles.

In spite of many protests the 4.36 p.m. from Brighton is still a two-coach push-and-pull set, with no lavatory accommodation for a 70-min. run and so overcrowded that first class passengers are invaded by crowds of workmen in filthy overalls *en route*. I have just heard that two married people with a flat in Sevenoaks who have to visit Brighton at least once a week are so annoyed at the operating officials' carelessness for passengers' convenience that they are leaving Sevenoaks to live in the outskirts of Brighton, though they would have continued to reside in Sevenoaks. Thus do nationalised British Railways drive away traffic.

Yours faithfully,

E. A. GURNEY-SMITH

Railway Timetable Maps

120, Leicester Road,
New Barnet. October 17

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I was interested to see that one of your correspondents has drawn attention to the poor map now contained in the British Railways timetable books.

My own complaint is with the Eastern and North Eastern Regions. During travels over the lines of the ex-L.N.E.R. totalling some 200,000 miles I was glad of the facility of reference afforded by the numbering of the tables, with these numbers indicated also on the accompanying maps. Even after nationalisation brought about changes in most of the table numbers the Regions brought the maps into line and thus minimised any possible inconvenience.

Now, however, the British Railways all-Region map is useless for most practical purposes and I feel that a return to the Regional maps marked with the relative table numbers is desirable; in fact, I consider the numbering of tables should be adopted by all Regions, following the Eastern and North Eastern model.

Yours faithfully,

R. G. LUCAS

A Remarkable Railway Renaissance

Frognal. October 31

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Mr. C. J. Allen's letter in your October 28 issue contains several curious statements. To begin with, it seems idle to speak of a railway being set on its feet when its net earnings are slumping. Next, Mr. Allen compares the fall in the "Monon's" freight revenue with "the 15·2 per cent. average loss of freight revenue by the whole of the railways of the United States." The Association of American Railroads gives no such figure in its return of revenues and expenses. Though July was a poor month, the total freight revenue of all the U.S.A. railways for the first seven months of 1949 was down only 7·2 per cent. The "Monon" has kept up its gross revenue better than many of its neighbours, but is in trouble because its expenses are mounting while other lines have reduced their working costs. The Pennsylvania, for example, countered a decrease of 8 per cent. in freight revenue with a cut of 8 per cent. in expenses and improved its net railway operating income to July 31 by 6 per cent.—an admirable piece of railway management.

For a parting shot, Mr. Allen quotes the slowing down of the "Royal Scot" and the "Cornish Riviera" as exemplifying "the British method of maintaining the *status quo ante*." If this means, in plain English, that our railways do not move forward, Mr. Allen's writings suffice to show that, before the war, there was a good deal of progress in train speeds and in rolling stock design. The Railway Executive, partly through causes beyond its control, has not recaptured the thrust and energy of the five years from 1934 to 1939, but Mr. Allen might give it credit for timing the train of trains—the "Flying Scotsman"—to reach Edinburgh this winter two minutes earlier than it did in 1900! The change just scraped through before the Government threatened British Railways with some reduction in maintenance and a restriction on new works.

Yours faithfully,

R. BELL

Speed "Records"

70, Rowlands Avenue,
Hatch End. November 4

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Few of us are likely to belittle any tendency that we may see on the part of British Railways to show a reviving interest in the speed of their trains. But one cannot help feeling that in this matter a good memory and a sense of proportion are both needed. I am prompted to write by the references in the Press recently to the times taken by Ocean Specials from Plymouth to Paddington, one of which was quoted on the "Scrapheap" page of your November 4 issue.

This stated that a "post-war record" of 4 hr. 7 min. for the journey, set up on September 26, had been broken by a new "record" of 3 hr. 59 min. on October 19, of which a signal check at Westbourne Park cost 3 min. The train was a five-coach one of 179 tons. May I point out that in 1904, *forty-five years ago*, on April 30, the Plymouth (Millbay)-Paddington journey was made in 3 hr. 54 min., on May 2 in 3 hr. 56 min., and on May 9 in 3 hr. 47 min.? Moreover, this was by way of the old route, *via* Bristol, 20 miles longer.

A train of five coaches again was hauled from Plymouth, reduced to four at Bristol, where a stop was made, and though the weight of the stock (148 tons to Bristol and 120 tons beyond) was certainly less than the 179 tons of October 19, 1949, in place of the powerful 4-6-0 on the latter train all the power available in 1904 was a 4-4-0 from Plymouth to Bristol and nothing more than a Dean 4-2-2 from Bristol to Paddington. Had the Westbury route been available in 1904, the overall time on May 9, 1904, might well have been 30 min. less than the 3 hr. 59 min. of 1949.

Has it been forgotten, also, that in the historic locomotive exchange trials of 1925 Driver Edward Rowe, with *Caldicot Castle* (not even a "King"), took fourteen bogie vehicles out of Paddington on the "Cornish Riviera Express," totalling 498 tons tare and 530 tons gross, and with two slipped at Westbury, two more at Taunton, and a fifth at Exeter (reducing the load progressively to 426/455, 363/385, and 292/310 tons) got the "Limited" into Plymouth in the astounding time of 3 hr. 52 min.—and this *twenty-four years ago*? When we get within nodding distance of some of these achievements of long past it will surely be time enough to talk about "records."

Yours faithfully,

CECIL J. ALLEN

London and Outer Area Services

London, S.W.1. November 1

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Your correspondent, Mr. R. G. R. Calvert, writing in the October 7 issue, has certainly given much thought to the London railway problem, but I should like to counter some of his proposals.

The "express" tube south of Kennington is needed to balance the ramifications of the Northern Line north of the Thames and obviate the need for reversing half the southbound trains at Kennington, thus causing overcrowding for several stations south. The Bakerloo will obviously link up one day with the Southern beyond Camberwell and take over at least one of the "Chatham" suburban services.

I cannot see that a useful purpose would be served by diverting the proposed tube through Brixton on to the Southern at Streatham Hill and thence through Crystal Palace Low Level. Admittedly this would be far less costly than a tube through Streatham and Thornton Heath, but the need is more and more for radial rather than peripheral lines, and is one of the great problems which the plan of the Working Party attempts to resolve. The bus and tram routes running along the main road to Croydon are heavily taxed, and, despite the good Southern Region suburban service on the old L.B.S.C. main line through Streatham Common, there is certainly ample traffic for a tube.

With regard to Mitcham Junction, the original idea was to carry the line from Streatham to Sutton more or less straight across Mitcham Common, but local opinion was against the bisection of the common, and the line was diverted over the sharply-curved route through Mitcham Junction. There seems to be a need for a station at Commonside East, Mitcham, to serve a built-up district some distance from a station.

Mr. Calvert is surely wrong in thinking that the Wimbledon-West Croydon line could be worked more economically by being converted into something like the Mumbles Railway, presumably with special non-standard stock. It has always struck me, who have known it well for more than twenty years, to be a model of its kind and efficiently and economically run. It carries a heavy goods traffic which it would be difficult to handle on a light railway.

The "slight diversion" of the Central Line to serve Paddington, although attractive on the face of it, would have disadvantages. The Central Line has all the traffic it can carry, and that of Paddington would be an added burden. It seems possible that Paddington will be brought nearer to Lancaster Gate by being moved up to Sussex Gardens if the recommendations of the Inglis Plan Committee are carried out.

The proposals for improving the Western Region suburban services merit close study. The idea of running full-length push-pull trains out of Paddington, on the model of those running out of the Gare du Nord, is ingenious, if the apparent British reluctance to a locomotive propelling anything more than two coaches can be overcome. As Mr. Calvert says, despite their curious omission from the Working Party report, the Western Region suburban lines surely are destined eventually to receive Central and District Line trains.

Although it may seem desirable to hand over the working of the Kingston loop and Shepperton lines to the District, which taps them at Richmond and Wimbledon—thus releasing paths on the Windsor and main lines of the Southern—residents in the Thames Valley (at least south of Teddington) might feel that it was a poor exchange to give up their present service, with its comparatively few stops to Waterloo, for the many extra stops which would be made by going round *via* East Putney and Earls Court. In addition, the line would have to be quadrupled between Richmond and St. Margarets, including Richmond Bridge, and an extra track built between St. Margarets and Twickenham Junction.

Yours faithfully,
B. G. WILSON

Southern Region Train Working

11c, Wynnstay Road.
Armadale, S.1,
Victoria, Australia. October 2

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Further to my letter of September 29, I give details of the peak hour working from East Croydon to London each morning, which may be of interest:—

EAST CROYDON: PEAK-HOUR TRAIN WORKING (WEEKDAYS A.M.)

Train services	Departures from East Croydon			
	For Victoria, 8.12–9.4 pass.	For London Bridge, 8.10–9.9	For Victoria, 8.30–9.29	For London Bridge, 8.31–9.23
From the Coast, *not* stopping at East Croydon	2		2	
From the Coast, calling at East Croydon	5	5	5	4
Three Bridges stopping trains	1	4		3
Tattenham Corner and Caterham		3		3
Steam trains from Oxted line	1	3	2	4
Trains starting at East Croydon	1		2	
Trains starting at Coulsdon, one non-stop from East Croydon, one calling at Clapham Junction	2		2	
Stopping trains from Coulsdon to Victoria	3		3	
Stopping trains from Coulsdon to London Bridge, calling only at Norwood Junction and New Cross Gate		3		3
Totals	15	18	16	17

Combined totals for Victoria and London Bridge—
8.10 to 9.9 = 33. 8.30 to 9.29 = 33.

It will be noted from the above table that there are slight variations between the two "peak" hours detailed, but in each instance there are 25 express services to London, divided almost equally between Victoria and London Bridge, in one hour, with two trains passing through not stopping, and 6 local "stopping" trains.

It will be observed that there is more interchange at East Croydon between trains from the South Coast during the morning peak-hour than in the evening "peak." Nearly all "up" trains provide connections between Victoria and London Bridge, while in the evening "peak" only three down coastal trains call at East Croydon, the 5 p.m. for Eastbourne, and the 5.28 and 6.21 "semi-fasts" for Brighton.

Since the war there have been two additional trains from Brighton and Worthing, etc., during the morning peak-hour. These are a "relief" to the 6.39 a.m. from Littlehampton, which departs West Worthing at 7 a.m., by the provision of a train from West Worthing at 6.50 which is due at London Bridge at 8.29, 4 min. ahead of the Littlehampton train. The 7.19 a.m. from Brighton provides a relief to the 7.40 from Brighton, and calling intermediately to Haywards Heath, arrives at Victoria at 8.34. Previously it ran only to Haywards Heath. Both these additional trains ran for some time before they were advertised in the public timetable.

A number of the East Croydon to Victoria express trains also calls at Clapham Junction to provide an interchange with the Western Section to Waterloo. But, apart from the 20 min. service from Coulsdon North to London Bridge, only one "semi-fast" service from the Redhill line calls at New Cross Gate for the East London line. This train calls at New Cross Gate at 8.38 a.m.

Yours faithfully,
W. A. SHEPHERD

"Vauxhall" in Russia

40, Kingsway, Ewell,
Surrey. October 14

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In the June, 1949, *Journal of the British Society of Russian Philately* (study of Russian postal history) there is an article relative to railway postmarks, in which it is stated that these marks, oval in shape, first appeared in 1905, being of two kinds: (1) for railway stations; and (2) for railway routes.

For (1) a new word was coined in 1905. This, literally translated, was ВОКЗАЛ (in Latin characters "Vokzal") or in abbreviated form ВОКЗ ("Vokz"). Following correspondence in a Sunday newspaper some years ago by the writer of the article as to the origin of this word, there seems little doubt that it is derived from the English "Vauxhall," *i.e.*, the Gardens, and not the well-known L.S.W.R. station. A certain Monsieur Vaux was the founder of Vaux Hall Gardens, where among other attractions, there were concerts, and the word "Vokzal" for a concert hall became introduced into the Russian language, probably by Pushkin, the famous Russian poet.

When the first railway line was opened in 1838 from St. Petersburg to Pavlovsk it seems to have been used mainly for excursions from St. Petersburg into the countryside, and a large concert hall and restaurant were built close to the railway station at Pavlovsk. This was called "Vokzal," and the word came to be used for the railway station.

By 1885 it was in general use, it is stated, for any large railway station, and the added meaning of "railway station" crept into the Russian dictionary.

This being so, one wonders how many "Vauxhalls" there may be on the railways of Russia.

The accompanying sketch of a typical oval postmark embodying "Vokz" signifies: Warsaw, Brest Station, 18.9.08.

Yours faithfully,
H. C. RAINDLE

Closing of Wayside Stations

80, Longmead Avenue,
Bristol, 7. November 6

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The writer of the letter on the closing of Barnby Moor Station, in the November 4 issue of *The Railway Gazette*, cites as the reason for this the poor train service it received. I think it must be borne in mind, however, that on a route like the East Coast main line south of Doncaster, with its continuous stream of traffic, too many stopping trains can be a nuisance. I believe it was for this very reason that the L.M.S.R. closed four stations between Preston and Lancaster in 1939, to speed up the flow of traffic.

It is also possible that the few trains which called at Barnby Moor and still call at other stations on the Grantham-Doncaster section with equally sparse services are mainly in the interests of parcel traffic.

Yours faithfully,
J. F. BURRELL

The Scrap Heap

Rainbow Railway

To solve rush-hour confusion, differently coloured gates to platforms serving different suburbs are being introduced in Philadelphia.—*From the "News Chronicle."*

* * *

The Bull Saw Red

A bull recently charged a red-painted diesel-driven train slowing up for a level crossing at Farges, East France. The train was derailed; the driver was seriously injured; and the bull killed itself.—*From the "Daily Mail."*

* * *

In the 1948 safe-driving competition organised by the Royal Society for the Prevention of Accidents, 665 London carters and vanmen of British Railways, London Midland Region, have gained awards. Eleven had been driving for 25 years, or over, without an accident.

* * *

Holding a Cigarette is Smoking

A man holding a lighted cigarette is smoking, even if he does not puff it, the Clerkenwell magistrate held recently, when he fined a man for smoking in a non-smoking Underground railway compartment.

It was said that defendant entered the compartment holding a cigarette. A passenger objected, and defendant apologised but refused to put the cigarette out. When the passenger protested that he was still smoking, defendant said: "I've got my boots on but I'm not walking."

The magistrate told him: "Immediately a person lights a cigarette he's smoking even if he doesn't puff it."—*From the "Daily Mirror."*

Modern Ark

Agricultural machinery, a jeep, and a tractor, together with 100 head of cattle, 500 head of poultry, feeding stuffs, and poultry houses, were carried by a British Railways, Western Region, 28-wagon special train, when Mr. W. F. Geach, Manor Farm, Westhall Hill, Burford (Oxford), travelled to his new home in Devonshire, on Thursday, November 17. The special train was arranged to leave Shipton-under-Wychwood Station at 4.30 p.m., immediately milking had been completed, and to arrive at Exeter at 9.56 a.m. on the Friday morning.

* * *

100 YEARS AGO

From The Railway Times *Nov.* 17, 1849

The Britannia Bridge.—On Saturday the first of the great tubes of the Britannia-bridge was finally lowered down again by a 3 feet fall on to its permanent bed of plates and rollers, the operation for effecting a junction with the tube on land having occupied about three weeks. The event was cheered by the assembled workmen and spectators, and hailed by the firing of cannon on the Carnarvonshire side of the straits. The hydraulic presses and lifting apparatus is now being removed from the Anglesea to the Carnarvonshire shore in order to raise the next tube as soon as it is floated to the piers, an operation which, weather and tide permitting, will take place on the 3rd of next month. The operations connected with this magnificent work have now been carried on for several months both by day and night, under the superintendence of Mr. E. Clarke, the acting engineer; Mr. L. Clark, the resident engineer; and Messrs. Foster and Wild; and from the strenuous exertions made there appears to be little doubt but that the first line of tubes will be opened for traffic on the 1st of March next.

* * *

Portraits for the Station

A suggestion that railway waiting rooms might be brightened by pictures other than the familiar holiday posters has been anticipated in some degree at Brockenhurst, on the borders of the New Forest. In the waiting room there may be seen (or could until recently) a series of framed portraits of Victorian celebrities, including Tennyson, Browning, Darwin, and Herschel, the work of Mrs. Julia Cameron, a friend and neighbour of Tennyson at Freshwater and an enthusiastic pioneer photographer. According to the inscription, they were presented by Mrs. Cameron to commemorate meeting her son on Brockenhurst Station in November, 1871, on his return from a long sojourn in Ceylon. The pier waiting room at Yarmouth, Isle of Wight, has a similar collection of portraits by Mrs. Cameron, presented by a granddaughter of Thackeray.—*From "The Manchester Guardian."*

* * *

Central Register of Guides

The Travel Association has compiled a voluntary central register of guides in order to outlaw touts who prey on visitors from overseas. The first certificates and red-white-and-blue badges for guides accepted for the register will be ready by January. The certificates will contain a photograph of the guide, and give his qualifications, languages, special knowledge of a particular area or subject, and so on. The scheme at first will be restricted to London and tourist centres within a day's journey; it is hoped later, with the co-operation of local authorities and the Scottish, Welsh, and Ulster Tourist Boards, to compile a national register.

* * *

Railwaymen's Fine Feathers

Budgerigars, canaries, pigeons, and rabbits from as far afield as London, Plymouth, and Portmadoc will be on view when the Staff Association of British Railways, Western Region, holds its tenth annual Fur & Feather Show at St. Silas Church Hall, Bristol, on November 19.

Over 400 entries have been received from all grades of railway workers in the Western Region and plaques will be presented to the winners of each of the nine sections of the show. In addition there are six special awards of silver trophies.

* * *

120-Year-Old Train

When Mr. Norman Swallow, features producer for the B.B.C. North Region, was compiling his contribution to the "News from Yesterday" series in the Light Programme, he applied for his "background noises" to the B.B.C. effects library. His programme is on the opening of the Liverpool to Manchester Railway, and he wanted the sound of 1830 railway trains. For once, and excusably, the effects library had to admit defeat. All its recordings of trains were too fast, but British Railways was able to provide a train from Euston to Bletchley that ran at 15 m.p.h., stopped at every station, and provided all the required noises. —*From "The Yorkshire Post."*

* * *

The Two-Way Stretch

(A double-deck train is running experimentally between Charing Cross and Dartford, Kent)

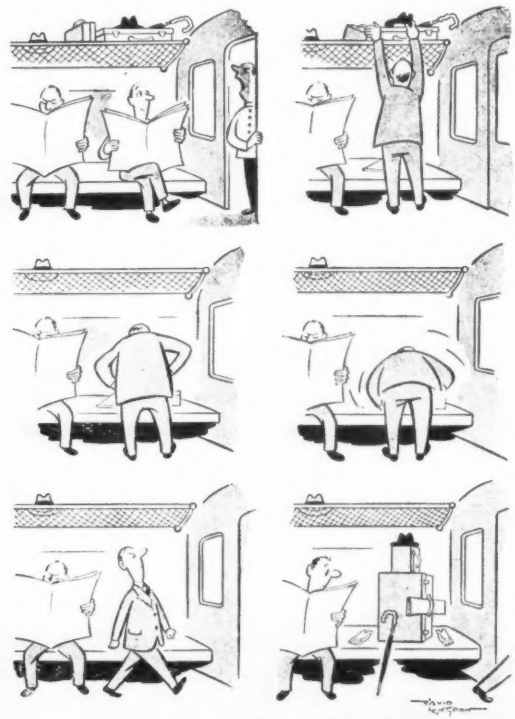
They're carrying out an experiment
On the line which runs to Dartford, Kent,
With a wonderful double-decker train,
In the hope of relieving the rush-hour strain.

Providing you're safely ensconced inside,
When the crowd bursts in like the flooding tide,
You can treat them to eyebrow lifts and glares
And frigidly murmur "Get up them stairs!"

But when the arrival of snow and sleet
Coincides with the absence of light and heat,
As sometimes happens, some heart may quail
And write in wrath to the *Daily Mail*,
Should stamping feet on the upper deck
Bring pain to his number nineteen neck.
For the best of us aloofness sheds
When we're anxious about our overheads.

Meanwhile, we are sure that Dartford, Kent,
Will give full credit for good intent,
And, although the journey to town in "layers,"
In a syncopation of seats and stairs,
May seem an amusing thing to those
Who never suffer from trampled toes,
It does ensure, without too much fuss,
A good turn out at the terminus!

A. B.



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OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

SOUTH AFRICA

Final Accounts for Financial Year 1948-49

The final result of the working of the railways, harbours, steamships, and airways services for the year ended March 31, 1949, was a deficit of £3,941,418. Revenue for the year totalled £88,937,259 and expenditure £92,378,677. Net revenue appropriations during the year amounted to £500,000. The loss on railways for the year, taken separately, was £6,094,190, but harbours returned a surplus of £2,437,809 and airways a surplus of £379,468.

In July, 1949, the operation of all services resulted in a loss of £257,947. For the period April to July of the current financial year, the railways showed an accumulated deficit of £1,655,457. Harbours and steamships reflected profits of £922,380 and £7,594 respectively. For these four months airways have an accumulated deficit of £302,398. The total deficit for all services for this period is £1,351,712 and includes net revenue appropriations amounting to £321,212.

Road Motor Services

As an experiment, inter-urban motor coaches operating between Durban-Pietermaritzburg-Kokstad-Umtata have been specially adapted to provide accommodation for first class non-European as well as European passengers. Similiar facilities are available between Eshowe and Durban. The luxury bus service between Windhoek and Tsumeb *via* Grootfontein in South-West Africa is being well patronised. The scheduled running time over this 364-mile route is 11 hours.

CHINA

Reconstruction and New Lines

According to an official statement made at a recent railway conference at Peking, 11,426 route-miles of war-damaged railways had been reconstructed to October 10 last. This represents about 68 per cent. of the whole of the Chinese railway system. The building of new lines is being pushed ahead. During the past six months new railways opened to traffic in the northern and central parts as well as in Manchuria totalled 2,800 route-miles and a further 1,000 route-miles should be completed before the end of this year.

EIRE

Rolling Stock Building

During the past year Coras Iompair Eireann has built 130 wagons and is building 200 cattle wagons of increased capacity. Work is in hand on a second batch of 50 wagons and 20 brake vans. About 50 old coaches of the small or 30-ft. type, adapted during the war to carry turf, are being converted into wagons. Approximately 1,000 wagons have received general repairs this year and another 592 have had heavy repairs.

Drawings and arrangements are complete for the 1950 programme, which provides for building 300 more cattle wagons, 260 covered goods wagons, and 30 more brake vans. Containers for different traffic, such as bricks, tiles, slates, and aluminium hollow-ware, and 500-gal. capacity mobile milk tanks have been introduced.

Two new diesel-electric locomotives are expected out of Inchicore by the end of the year. They are 915 h.p., have double-bogies, and will give greater speed and economy in haulage of goods trains, and probably also of passenger trains on secondary or suburban lines.

No new coaches have been built since 1935 and there are heavy arrears to be made up. Although parts such as wheels and axles of new stock are at Inchicore, completion of new coaches and wagons has to await the arrival of sufficient heavy steel, of which the 1949 allocation was only one twenty-fifth of that required. Work has begun, however, on a prototype coach from material available.

A batch of 25 new coaches will be turned out in 1950 and 50 in 1951. A total of 105 coaches is being converted from gas to electric lighting.

Traffic Results

In the first 33 weeks of 1949, 4,843,474 persons were carried by train, an increase of 36,000 on 1948. The better supply of coal has enabled more trains for religious, social, and sporting events to be run.

This year 846 special excursion trains, compared with 777 for the whole of last year, have been run. The all-in tours, by rail and road, have been revived after nine years and have proved popular.

Way and Works Improvements

There are still many speed restrictions, but a beginning has been made with re-sleepering and relaying of track. Eighteen stations have been changed to electric lighting. Installation of automatic telephone exchanges for railway use, new electric water-pumping plants for locomotive service and new vacuum cleaning installations at ten stations are among minor improvements.

Refuge loops have been added this year at points on the main southern lines saving as much as half-an-hour on a goods train journey by shortening the hold-ups caused when passenger trains have to be allowed through. At Waterford, the new wharf and goods store on the north side of the river is being rapidly erected.

SWITZERLAND

Electric Power Shortage

The prolonged drought in last Spring and summer lowered the water level in the storage lakes feeding the hydro-power stations of the Federal Railways, Ritom, in the Gotthard massif, Vernayaz, near Martigny, in the Rhone valley, and Barberine, in the Trient region south-west of Martigny. Even the river-fed power stations at Amsteg and Göschenen in the Gotthard massif, Massaboden in the Rhone valley, the second power station at Vernayaz, and Trient, failed to produce the power normally expected.

Strict economy measures had, therefore, to be adopted. It has so far been possible to avoid drastic measures, such as curtailment of train services, but a restriction has been imposed on the operation of special trains on electrified lines. A greater number of steam locomotives has been placed in service on the electrified lines, and shorter trains may have to be substituted for the heavy trains now run.

Power produced in the second quarter of 1949 amounted to 178,663,000 kWh., as compared with 185,162,000 kWh. in the comparable period of 1948.

The Federal Railways used additional supplies from power stations at Etzel, south of the Lake of Zurich, and at Rupperswil-Auenstein, north of Lucerne, and from a number of other stations. Power utilised for electric traction during the second quarter of 1949 amounted to 209,420,000 kWh., or 2,891,000 kWh. less than in the corresponding months of 1948, despite a 5 per cent. increase in passenger services, which, however, was offset by curtailment of freight train-mileage.

Federal Railways Works Programme for 1950

Deterioration of the financial situation has compelled the Federal Railways to reduce their way and works and rolling stock building programme for 1950 to a minimum. Only 20 per cent. of the total outlay of 137,000,000 francs is earmarked for new construction and acquisitions. Of the fr. 6,400,000 earmarked for works on open line, almost one half is for extensions of block and automatic signalling installations, considered essential to the present high-speed and intensive train services. The other works in this category are mainly replacement of bridges and improvements to lines in connection with electrification.

Geneva Junction Line

The only line under construction is the Geneva Junction line between the Cornavin and Eaux-Vives stations, on which a further fr. 700,000 are to be spent. The comparatively small sum for further electrification includes the Sissach-Läufelfingen-Olten line, which formed a part of the main line from Basle to Olten, Berne, Geneva, Lucerne and the Gotthard before the opening of the Hauenstein Lower tunnel in 1916.

Most of the amount earmarked for new rolling stock is in payment for vehicles already in order. During 1950 orders are to be placed to the value of fr. 5,600,000 for locomotives, fr. 25,000,000 for coaching vehicles and fr. 1,300,000 for goods and service vehicles. There is still a shortage of motive power, and new coaching vehicles are necessitated by the withdrawal of over-age stock. Seven million francs are needed for the extension of the hydro-electric plants of Ritom Barberine and Massaboden, which will increase the output of these three railway-owned plants.

BULGARIA

New Railways

A number of new railways will be built within the next few years in addition to those completed or begun during the 1947-1948 Two-Year Plan. The following lines are stated to have been completed during that period: a 4·3-mile link between the Danube ports of Somovit and Nikopol, which is an extension of the 23-mile standard-gauge railway from Yasen (on the northern main line from Sofia) to Somovit; Silistra-Samuil, 7½ miles, the building of which was mentioned in *The Railway Gazette* of January 1; and the extension of the standard-gauge Voluyak-Bankya to Pernik. The 22-mile standard-gauge line between Lovetch and Troyan was completed in the early part of the plan.

The Vratza-Orjahovo and Makotzevo-Sopot lines are to be completed within the 1949-1953 Five-Year Plan, with a third line, Liaskovo-Zlataritsa, 9·3 miles long begun in 1948. Liaskovo is the terminus of a five-mile branch from Gorna Orjahovica, an important junction where

the Sofia-Varna and the Ruse-Rakovski lines meet.

A standard-gauge line, 34½-miles long, is to be completed within the five-year period between Tcherven Breg, on the Sofia-Varna main line, 87½ miles north of Sofia, and Gigen, a town on the confluence of the Danube and the Isker. The railway is to follow almost entirely the course of the Isker river.

Lines Envisaged

In addition, the Five-Year Plan envisages the construction of various lines which are to be completed only in the period beginning 1954. A main line is to connect the Black Sea port of Burgas with Elhovo and Gulabovo, about 84 miles. Elhovo, the former Turkish Kizil-Agatch, is the terminus of a 28½-mile line branching at Yambol from the Plovdiv-Burgas main line. The aim is to establish a link with the Sofia-Plovdiv-Svilengrad main line.

The Lovetch-Troyan standard-gauge line is to be extended southwards to Christo Danov as the first section of a link to Karlovo, an important railway centre which is to be connected with Sofia by the Makotzevo-Sopot line. The distance between Troyan and Karlovo is about 40 miles, through the mountains of the Balkan range. In the south a standard-gauge line, some 65 miles long, is to be built from Kritchim, on the Sofia-Plovdiv main line, towards the Greek frontier, as far as Zlatograd (to the northwest of Xanthi, on the Salonica-Pythion line). Kritchim is 96 miles east of Sofia, and a branch line runs from there south-westwards as far as Peshtera, 20 miles. The new line from Kritchim is to lead due south through the Kritchna valley to Devin (Dovlen) and then turn south-eastwards to connect with Smolyan (Ismilan) and Zlatograd. Difficult mountain country is to be traversed in this region where the crest of the Rhodope range forms the frontier. A map of the Bulgarian railways appeared on page 579 of our June 2, 1944, issue.

BELGIUM

New Steel Bridges for the Brussels-Charleroi Line

The introduction of electric traction on the Brussels-Charleroi main line, reported in the October 28 issue, has necessitated the four-tracking of a section of the line between Luttre and Charleroi, and a number of steel bridges had to be built. Because of unavoidable initial delays in obtaining the necessary quantities of steel (more than 2,000 tons), the five contractors concerned were asked to make a special effort to erect the bridges in time for the planned inauguration of the electric service. All the bridges were constructed within periods varying between four and eight months. Among them were two bridges over the Charleroi Canal, of 29 and 31 metres span respectively, and an important bridge over the river Sambre of 61·3 metres span, weighing 532 *tonnes*. The last-named was shop-assembled in less than five months. Another important steel structure needed for high-speed electric operation, is a four-span flyover at Marchienne-au-Pont, the construction of which, requiring 757 *tonnes* of steel, has taken just over six months.

GERMANY

New Station Building at Fulda

The old station building at Fulda, dating back to about 1870, was destroyed in 1944. Because of a heavy influx of refugees, traffic to and from the town increased considerably after the war, and the reconstruction of the station became urgent. A new building was decided on, making use of certain existing outer and basement walls only. It measures 368 ft. by 66 ft. and is designed to cope with an intensive peak-hour traffic. Thus, the central concourse has an area of 4,300 sq. ft., apart from the separate booking office area in the right wing which also accommodates the luggage and enquiry offices.

Waiting rooms and buffet are in the opposite wing. The existing subway leading to the platforms is being used until a new subway in the axis of the central concourse can be built. The upper floor contains office accommodation and additional rooms belonging to the station restaurant.

An interesting feature is the setting back of the upper floor on the platform side which gives improved sky-lighting for the ground-floor premises. In the construction building materials requiring a minimum use of coal and timber have been selected.

Publications Received

The Lynton & Barnstaple Railway. By L. T. Catchpole. Fourth edition. South Godstone, Surrey: The Oakwood Press, Tanglewood. 7¼ in. × 5¼ in. 35 pp. Illustrated. Price 6s.—This book was first published in 1936, as a memorial to the narrow-gauge railway in North Devon which gave great pleasure to tourists, but little satisfaction to its promoters. Frequent enquiries since the third edition was exhausted, in 1939, have revealed the continuance of interest in the railway, which has now been abandoned for 14 years. The present edition includes almost the whole of the original text, but the appendices of newspaper extracts have been omitted.

Fifty Years of Model Making.—The standard of craftsmanship which separates the ill-proportioned toy from the perfect model is amply demonstrated in a 64-page booklet produced by Bassett-Lowke Limited to commemorate its 50 years of model making. From the earliest models depicted in this beautifully-produced booket, there is evidence of a continuous attempt to improve accepted standards in the ever-increasing range of model engineering. The history of the firm's achievements extends from Mr. W. J. Bassett-Lowke's earliest products to the present day, when the facilities are divided between the needs of special order work and the claims of the modelmaking hobby.

The Channel Tunnel and Ferry. By J. L. Harrington. Locomotion Papers No. 4. South Godstone, Surrey: The Oakwood Press, Tanglewood. 7¼ in. × 4¼ in. 18 pp. Illustrated. Paper covers. Price 2s. 6d.—This short factual survey of the various cross-channel and train ferry schemes was prepared with the concurrence and encouragement of Sir Eustace Missenden, Chairman, the Railway Executive, as a paper for the British Railways (Southern Region) Lecture & Debating Society, in the Spring of 1949. The history of the tunnel scheme is one of early promise, followed by years of disappointment and frustration for the promoters. Preliminary works were begun on both sides of the Channel, by British and French companies, in 1875, but military objections were raised, and the Board of Trade ordered the suspension of the works on the English side in 1882. Since that time, the question has been raised in Parliament on several occasions, but without success. A cross-Channel train ferry was first projected in 1867, but many years elapsed before real progress was achieved. The construction of the necessary docks at Dover and Dunkirk was begun in 1930, and regular services were established in October, 1936.

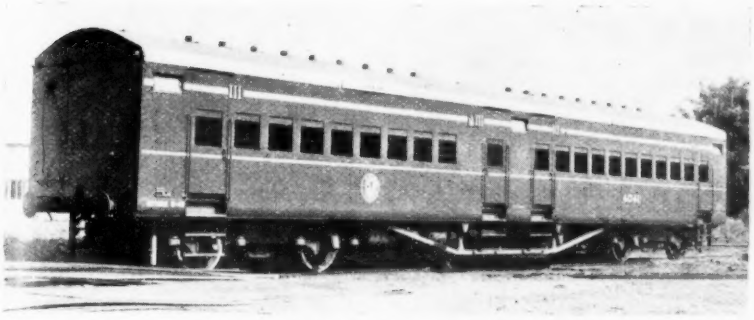
Atlas of Isothermal Transformation Diagrams.—Control over the results of heat treatment of steel has been extended in recent years by the study of "S-curves" or isothermal transformation diagrams. The first authoritative published collection of S-curves for the main types of wrought steel in current use in this country is contained in the "Atlas of Isothermal Transformation Diagrams" issued by the Iron & Steel Institute, 4, Grosvenor Gardens, London, S.W.1, as Special Report No. 40. The data have been collected by the Thermal Treatment Sub-Committee of the British Iron & Steel Research Association and are the results of collaborative work by a number of industrial laboratories. The atlas contains "S" curves for 24 En steels of the British Standards Institution's En series. Each diagram is accompanied by a data sheet which records the compositions of the steel, its previous treatment, the hardness of the transformation products obtained at various temperatures, photomicrographs, and general comments which include reference to the hardenability of the steel. The diagrams are printed on paper suitable for pencilling in additional curves; curves traced on transparent isothermal transformation test charts may be conveniently superimposed on the printed diagrams. Suitable charts have been designed by the Thermal Treatment Sub-Committee and are available from Pawson & Brailsford Limited, Mulberry Street, Sheffield.

The Call for Skill and Ability in The English Electric Company Limited.—This brochure outlines the history and activities of The English Electric Company and gives details of its training schemes for craft, student, and graduate apprentices, and of special training facilities in research, outside erection, and administration. Craft apprenticeships are for boys aged about 16 good with their hands, and normally last five years. Student apprenticeships are for boys aged between 16 and 18 with a good School Certificate with credits in mathematics and science, and last four years. Graduate apprenticeships are, as the name implies, for young men with a degree or diploma in engineering, or an honours degree in mathematics or physics. Arrangements have been made with British Railways, the British Electric Authority, and certain steel and cable manufacturing firms and similar concerns in the electricity and engineering world, for special training to be given to selected English Electric apprentices. There are excellent illustrations of English Electric products and of apprentice activities. The brochure will appeal both to parents and to their sons considering a career.

British Railways Continental Handbook.—A new feature of the winter 1949-50 edition is the showing of the Swedish Lloyd Line Tilbury-Gothenburg service as a Continental service in conjunction with British Railways. The Channel Islands winter services are as before nationalisation, with sailings on alternate weekdays from Southampton and Weymouth; Paddington remains the London terminus of the Weymouth boat trains.

All-Metal Third Class Carriage for India

A prototype of improved passenger accommodation as constructed by Hindustan Aircraft Limited



Broad-gauge third class coach built by Hindustan Aircraft Limited

THE first of a series of improved all-metal broad-gauge third class coaches in which principles of aircraft construction have been applied, has been completed by Hindustan Aircraft Limited for the Ministry of Railways, Government of India. The steel structure is specially treated to resist corrosion and ensure long life, and maximum moving dimensions to Indian railway standard specifications have been used in the 70 ft. long body. The coach, with its thin partitions, made possible by the use of steel, provides more room inside than in the present wooden coaches, and it will be noted from the general layout that lavatories have been located at both ends of the coach in place of passenger seats, so as to minimise the danger of injuries during collisions. Door steps have been built to the same width as the door, so that there will be no difficulty in boarding or alighting from the coach. The external appearance of the coach has been considerably improved by the addition of rounded fairings, which keep the underframe out of sight.

The coach is made up of two large and two small compartments, one of which has been designed for women. Special features of the women's compartments include safety bars for windows, inside door latches, expanded metal frames for door windows and illuminated sign boards. Each large compartment has seats for 25 passengers and each small one for 13 passengers. In determining these figures, the latest requirement of the Railway Board, which is for a minimum side width of 21 in. to each passenger, against the previous 19½ in., has been taken into account; there also is more floor area to each passenger. Two lavatories for each of the large compartments and one lavatory for each of the small compartments are provided.

Broad seats and bunks have been arranged on a three-tier system, in which the seats are installed in the transverse direction with two berths over each long seat. Small fixed ladders give access to the berths. In addition to the berths, which can be used for luggage during daytime, there are a number of full-length luggage racks. The small sub-compartments with long seats are situated along one side of the coach, opposite to the individual seats; there is a longitudinal aisle between. The single seats are expected to be popular with short-distance travellers and the sub-compartments should be suitable for long-distance travel.

The lavatory compartments are fitted with a stainless-steel flushing-type lavatory, a gravity cock, coat hooks, and a shelf; wash basins and mirrors are also provided.

To allow easy access, doors have been widened, and more space is provided in the doorway. The windows have been increased in number and are located to give maximum comfort to passengers and ventilation to the compartment. Each window is provided with a glass and a louvre shutter and has gravity safety catches at the top and bottom. One exhaust roof ventilator has been provided over each top bunk in all compartments.

A special feature is the provision of electric fans with individual switches, and the interior of the coach is brightly illuminated by electric lamps. Though the coach is basically of all-metal construction, care has been taken to insulate the inside of compartment from outside heat. Ventilated air space provided between the outside skin and inside panelling prevents the heat being transmitted to the interior of the coach. Hard cement-like oxychloride compound is used for flooring, as heavy wear and tear is expected, and will facilitate washing.

The interior is finished in dark green, light green and white colours with brown lines to break the monotony. The exterior sides and ends are finished in Gulf red and the standard black of the roof has been replaced by aluminium to facilitate reflection of heat.

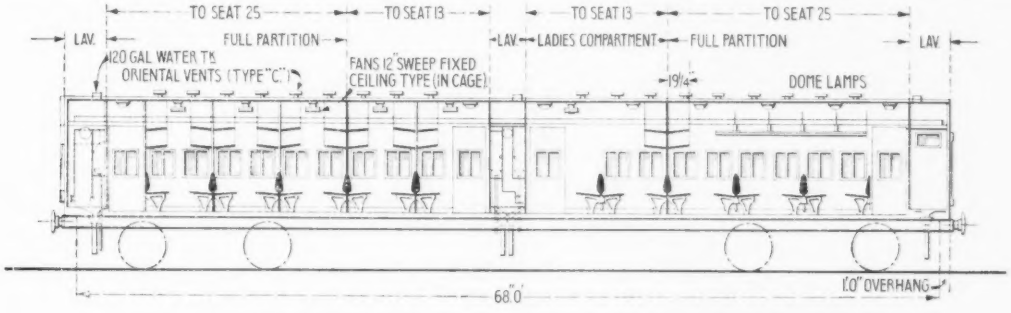


Diagram and seating accommodation of the all-metal coach

L.N.E.R. MASONIC REUNION DINNER.—The twenty-first L.N.E.R. Annual Masonic Reunion Dinner was held recently at the Abercorn Rooms, and was attended by members from all parts of the former company's system; the chair was occupied by General Sir Daril Watson, Member of the Railway Executive. The toast of "The former L.N.E.R. Company" was proposed by Mr. K. C. Marrian, District Engineer, Manchester, London Midland Region, who was at one time in Great Northern Railway service, and responded to by Mr. A. E. H. Brown, Chief Docks Manager, South Wales, Docks & Inland Waterways Executive, who was formerly Assistant Chief Regional Officer, Eastern Region. That of "The Chairman" was proposed by Mr. H. E. Stratton, Assistant Civil Engineer (Steelwork), Eastern Region who also made an appeal on behalf of the Masonic Charities, which realised a substantial sum. The toastmaster was Mr. D. Crick, of the Estate & Rating Surveyor's Department, Eastern Region; and Mr. H. Collcott was Honorary Secretary & Treasurer of the committee which arranged the dinner on this occasion.

EXTENSIONS AT ROY BRIDGE.—The up and down loops at Roy Bridge, the shortest on the Scottish Region West Highland line have been extended recently to accommodate 35 wagons, engine and van. The work, carried out by the Civil Engineer's Department, Scottish Region, includes the provision of a short new sand drag on the down loop.

Tests of a C. & O. 2-6-6-6 Locomotive

Dynamometer car tests conducted with an American simple-expansion Mallet type locomotive in freight service between Russell, Kentucky, and Toledo, Ohio

By E. C. Poultney, O.B.E., M.I.Loco.E.

THE locomotive trials forming the subject of this article were carried out in America in the latter part of 1948 for the purpose of establishing the performance of the Chesapeake & Ohio Railway Class "H8" Mallet type simple-expansion locomotives in heavy-freight service between Russell, Kentucky and Columbus, Ohio, and from Columbus to Toledo, Ohio; these were division runs of 109·9 and 120·6 miles, respectively.

The C. & O. locomotives of the class under notice were first built in 1941, and were illustrated and briefly described in an article contributed by the writer to *The Railway Gazette* of March 11, 1949. The particular locomotive selected for these tests was Class "H8," No. 1651, one of the latest built by the Lima Locomotive Works, Lima-Hamilton Corporation, and delivered to the C. & O. in November, 1948.

There is now a total of 60 of these engines in traffic on the C. & O. system; they are all alike except that the last 15 delivered (including No. 1651) differ slightly in the arrangement and number of the flues and tubes, which has the effect of modifying the heating surfaces of the boiler and the superheater.

Weight of Trains

The trains worked in these trials totalled over 12,000 tons (at 2,000 lb.) behind the tender, and it is thought that some particulars of the powers required and the working speeds in m.p.h. will be found of interest as giving an idea of the locomotive performance required in very heavy freight service. The data presented refers mainly to the actual powers developed and the speeds attained in normal freight traffic. Particulars of the coal and water consumptions are not included, as for the purpose of these trials they were not required.

Particulars of Tests

The dynamometer car tests forming the subject of the present article comprise two through runs from Russell, Kentucky, to Toledo, Ohio, a distance of 230·5 miles, and were made with the object of determining the performance of these Mallet type engines in heavy coal traffic, without assistance on the ruling grade at Limeville bridge, about 15 miles from Russell.

This is the principal grade between Russell and Columbus, and extends for the first 17·25 miles of the Northern Sub-Division. On the bridge approach and on the Limeville bridge the line rises for about 1·25 miles, the grades being 1 in 143 and 1 in 147 for this distance, and the grades over the remaining 16 miles vary from level to 1 in 500. This is the most difficult part of the line between Russell and Columbus and, as it is inconvenient to make a general practice of providing assistance at this point, it decides the tonnage that can be handled between these two points.

From Columbus to Toledo, on the Toledo Sub-Division, there is a long continuous up grade, extending for about 15·5 miles, encountered soon after leaving Columbus. The maximum grade in this distance is 1 in 200 and the mean about 1 in 250. It is the practice to double-head trains out of Columbus up to milepost C16, when the assistant engine is cut off.

After re-starting from milepost C16 the line to milepost C81 is undulating; the momentum of the train, therefore, reduces to a large extent the pull required over the uphill parts of the line. From the 81st milepost to the end of the journey at Toledo, Walbridge Yards, the line is on descending grades.

In conducting the tests, only the drawbar pull and speed in m.p.h. by mileposts were recorded on the dynamometer car; on the locomotive boiler and steamchest, pressures and back pressures were recorded; also the cut-off and the height of water in the gauge glass were noted at five-min. intervals. The information noted on the locomotive was only recorded when the engine was operating with a full throttle opening.

The trials were made under practically the same operating conditions, with little interference from other train movements. The average running times and speeds from Russell to Toledo are summarised in Table I. Coal and water were taken

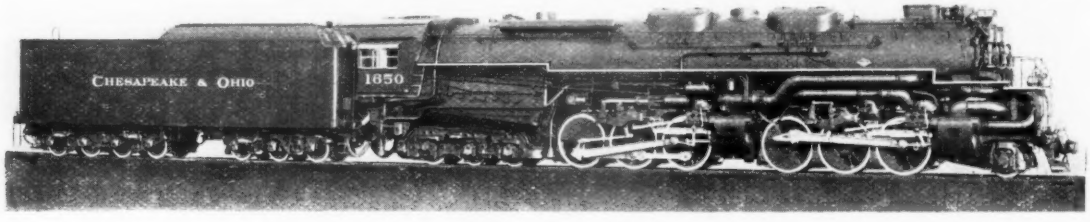
TABLE I—RUNNING TIMES AND SPEEDS RUSSELL, KY., TO TOLEDO, OHIO, WALBRIDGE

Running time

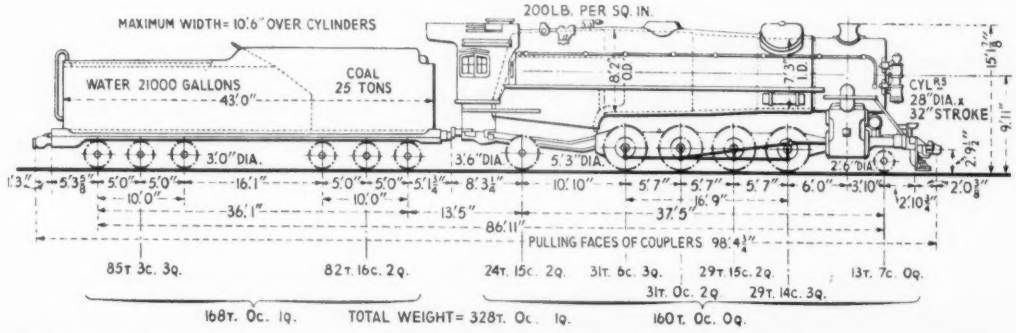
—	Miles	Test No. 1	Test No. 2
Russell to Columbus	109·9	4 hr. 28 min.	4 hr. 21 min.
Columbus to Toledo	120·6	4 hr. 07 min.	4 hr. 28 min.
Total ...	230·5	8 hr. 35 min.	8 hr. 49 min.

Average speeds, m.p.h.

Russell to Columbus ...	109·9	24·6	25·2
Columbus to Toledo ...	120·6	29·3	25·8
Average	230·5	27·0	25·5



Chesapeake & Ohio Railway Class "H8" 2-6-6-6 locomotive



Principal weights and dimensions of a Class "K3" 2-8-2 locomotive used for assistance between Columbus and milepost C16 on the test runs

at C.B. Cabin, 47 miles from Russell, and at Columbus. It was not necessary to take coal between Columbus and Toledo, though water was taken after detaching the assistant engine at milepost C16.

The assigned tonnage over the distance between Russell and Toledo with the 2-10-4 Class "T1" engines* is 13,500 tons (at 2,000 lb.). Due, however, to cold weather, this was reduced by 10 per cent. for these tests, giving a tonnage of 12,150 tons.

The first trip was made with 12,230 tons, consisting of 158 loaded coal cars, the caboose and the dynamometer car; this was a through run from Russell to Toledo. After servicing the locomotive at Columbus, the train was double-headed up to milepost C16, the assisting engine being a Class "K3" 2-8-2 type No. 2344, having a rated tractive force of 67,700 lb.

The second test was made with a train of 12,172 tons, consisting of 147 loaded cars and caboose and the dynamometer car.

Running after Stop at Foot of Bank

This run differed from the first in that a stop was made at a point about 2·25 miles before reaching N.J. Cabin, which is at the approach to Limeville bridge. This stop was made to ascertain if the test locomotive could handle the train over the ruling grade on the Limeville bridge and approach, without assistance, after making a stop, which is sometimes required to attach loaded cars handed over at this point from the Louisville & Nashville Railroad. After re-starting from this point the train reached a speed of 25 m.p.h. on passing N.J. Cabin, and the minimum speed on the grades up to and on the Limeville bridge was 6·5 m.p.h. On the previous run, when no stop was made, the train passed N.J. Cabin at 27 m.p.h., and the minimum speed was 10 m.p.h. Particulars of the performance of the engine between these points for the second test after making the special stop are given by Table II.

This statement gives particulars of the speeds and also the pull recorded by the dynamometer at intervals of 1,000 ft., reckoning from N.J. Cabin, and it is interesting to note that the lowest speed was attained when the locomotive was on the level road at the top of the grade, due, of course, to the fact that the major part of the train, due to its great length of, approximately, 1·5 miles, was still on the grade.

TABLE II—SPEEDS AND DRAWBAR PULL, ACTUAL, LIMEVILLE GRADE TEST No. 2, FULL REGULATOR

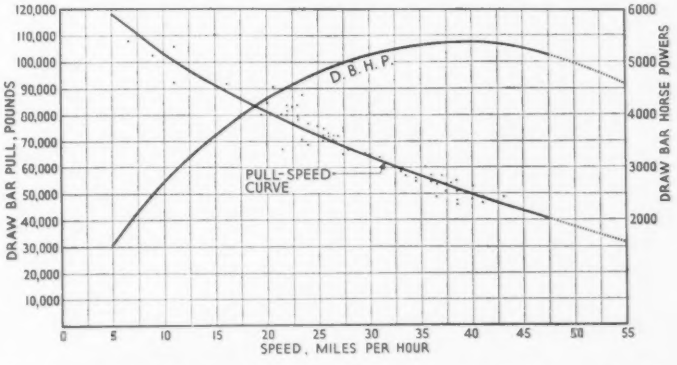
Location Feet from M.J. cabin	Speed, m.p.h.	Pull, lb.	Gradient
1,000	25·5	77,000	1 in 880
2,000	25·5	76,000	..
3,000	25·5	79,000	..
4,000	25·5	76,500	1 in 143
5,000	25·5	76,000	..
6,000	24·5	78,000	..
7,000	23·5	81,000	1 in 147
8,000	21·5	86,000	..
9,000	19·5	94,000	..
10,000	15·5	102,000	1 in 500
11,000	12·5	107,500	Level
12,000	10·0	103,000	..
13,000	6·5	103,000	..
14,000	7·0	106,500	..
15,000	9·0	103,000	..

The average actual pull of 92,000 lb. was exerted by the locomotive from entering the grade till it again commenced to increase speed when the greater portion of the train was off the gradient. The mean speed was 18·4 m.p.h., representing an average of 4,526 h.p. The highest power developed was attained at 25·5 m.p.h., when the actual pull was 79,000 lb.

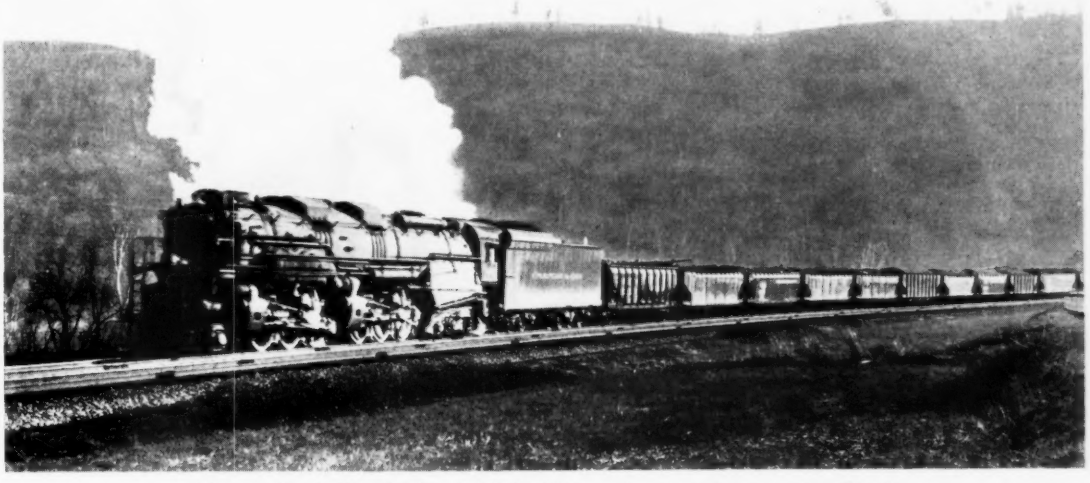
At the lowest speed, of 6.5 m.p.h., the drawbar pull was as much as 108,000 lb., equal to 98 per cent. of the maximum rated tractive force of the engine, which is 110,200 lb.

Reverting to the first test run, the work done by the test engine and the Class "K3" helper on the rising grades from leaving Columbus up to the 16th milepost will be noted. Over this distance the two engines maintained an average speed of 24·7 m.p.h. and a mean actual pull of 109,142 lb., thus producing an average of 7,200 h.p. The combined rated tractive force of the locomotives is 177,900 lb., so that the actual average pull developed was 61 per cent. of the maximum rated tractive force of the two engines. The maximum combined powers developed was 7,670 h.p. at 23 m.p.h. with an actual pull of 125,000 lb.

On the second trip over this section of



Drawbar pull and horsepower curves for test run No. 1, between Russell, Kentucky, and Columbus, Ohio. 109·9 miles



Chesapeake & Ohio Railway 2-6-6-6 locomotive at work on a mineral train

* For particulars of these engines see *The Railway Engineer*, October, 1934, and *The Railway Gazette*, March 11, 1949.

the journey the train made a special stop near milepost C3 on account of some trouble with the headlight of the assistant engine, which was again No. 2344. To re-start the 12,172-ton train on a rising grade of 1 in 334 made is necessary for the two locomotives to exert an actual pull of 164,000 lb. The mean speed attained over the 16 miles of rising grades on this occasion was 24·2 m.p.h. and the actual mean pull 105,410 lb., giving 6,820 h.p.

The accompanying graph has been prepared by the writer and shows the pull-speed and h.p. curves, based on the corrected drawbar pulls developed during the first test run from Russell, Ky., to Columbus, Ohio. The h.p. curve has been computed from the pull-speed characteristic. This plot does not show the maximum powers possible with these locomotives, but probably illustrates the locomotive performance when operating these very heavy trains under normal operating conditions.

Overall Results

The overall results of these tests are summarised in Table III, which includes particulars of the mean sustained steam pressures. The mean boiler pressures are about 97 per cent. of the maximum, which indicates the boiler capacity was ample for requirements, though the cut-offs average from 61 to 62·6 per cent. In Table IV will be found some of the leading dimensions of the Class "H8" 2-6-6-6 Mallets, as well as the "T1" 2-10-4 engines, and the "K3" class 2-8-2's. Each type is fitted with a feed water heater and a stoker.

The writer is indebted to Mr. C. B. Hitch, Chief Mechanical Officer, Chesapeake & Ohio Railway, for assistance in the preparation of this article and to the Lima Locomotive Works for the photograph from which the illustration of engine No. 1650 was made.

TABLE III—SUMMARY OF TEST RESULTS

—	Russell to Columbus		Columbus to Toledo	
Run	No. 1	No. 2	No. 1	No. 2
Date	30-11-48	2-12-48	30-11-48	2-12-48
No. of loaded cars	158	147	158	147
No. of empties	0	0	0	0
No. of others	2	2	2	2
Total cars	160	149	160	149
Total tonnage (at 2,000 lb.)	12,230	12,172	12,230	12,172
Total time	5 hr. 18 min.	5 hr.	4 hr. 23 min.	5 hr. 09 min.
Net time	4 hr. 28 min.	4 hr. 21 min.	4 hr. 07 min.	4 hr. 28 min.
Total distance	109·9 miles	109·9 miles	120·6 miles	120·6 miles
Average speed	24·6 m.p.h.	25·2 m.p.h.	29·2 m.p.h.	25·8 m.p.h.
No. of stops	3	3	2	5
Average boiler pressure, p.s.i.	251·5	256·4	247·1	252
,, steam chest pressure, p.s.i.	235·7	239·5	231·3	236
,, back pressure, p.s.i.	15·2	15·5	15·1	18
,, cut off	60·7 per cent.	62·2 per cent.	61·1 per cent.	62·6 per cent.
,, atmospheric temperature	47° F.	38° F.	53° F.	47° F.
Rail	Dry	Dry	Dry	Dry

TABLE IV DIMENSIONS OF LOCOMOTIVES

Class	"H8"	"T1"	"K3"
Type	2-6-6-6	2-10-4	2-8-2
Cylinders, no., dia. × stroke	(4) 22·5 in. × 33 in.	(2) 29 in. × 34 in.	(2) 28 in. × 32 in.
Driving wheels, dia.	5 ft. 7 in.	5 ft. 9 in.	5 ft. 3 in.
Boiler steam pressure, lb. per sq. in.	260	260	200
Heating surfaces—Evaporative	6,794 sq. ft.	6,635 sq. ft.	4,524 sq. ft.
Superheater	2,922 sq. ft.	3,030 sq. ft.	1,173 sq. ft.
Total	9,716 sq. ft.	9,665 sq. ft.	5,697 sq. ft.
Grate area	135·2 sq. ft.	121·7 sq. ft.	80·0 sq. ft.
Weights—On drivers	504,010 lb.	373,000 lb.	273,000 lb.
Engine	751,830 lb.	566,000 lb.	358,500 lb.
Engine and tender	1,255,840*lb.	896,670*lb.	734,840 lb.
Rated tractive force	110,200 lb.	91,584 lb.	67,700 lb.
Booster	No	Yes	No

* Tenders 2 3 loaded. R.T.F. at 85 per cent. boiler pressure

Freight-Train Working in Kenya

Class 56 4-8-2 + 2-8-4 Beyer-Garratt locomotive on goods train leaving Nairobi, East African Railways.
(See paragraph in our November 11 issue)

Manganese Crossings at Newcastle

Further renewal of a complicated crossing in cast manganese-steel

THE complicated layout of crossings at the east end of Newcastle Central Station has recently been renewed. The work occupied four consecutive weekends in October and 184 engineering and signal and telecommunications men in three shifts. During the operation 25 track circuits were disconnected and replaced.

On Sundays, October 2, 9, 16, and 23, the High Level Bridge was closed to traffic, and diversions were arranged *via* the King Edward Bridge for passenger and goods trains to and from Stockton, West Hartlepool, and Sunderland. Electric services between Newcastle and South Shields were replaced by steam trains, which were similarly diverted, and in addition main-line trains to the north were worked over the one through line left open while the renewal was in progress.

Reduced Maintenance

Before 1912, the crossings were fabricated from flat-bottom rails in ordinary rail steel, but because of the density of traffic and number of component parts, their maintenance proved both difficult and costly. In 1912, however, the crossings were renewed in Era manganese cast steel, and subsequent replacements in 1924, 1938, and again this year, have been in this special steel. The use of cast manganese crossings has been justified by the reduced maintenance and longer life, factors of considerable importance at this busy centre, with its complicated network of intersecting tracks.

Crossing check rails and wings are incorporated in the castings, and a feature of the design is the ramping of the flangeways, the bottom of the grooves being gradually raised at each side of the intersections so as to reduce hammering and subsequent batter of the crossing noses. The steelwork comprises 93 castings, weighing over 70 tons, and these are laid on timber beams 18 in. wide and 11 in. deep, with 2-in. oak packings between the beams and steelwork.

The beams are bedded on fine tar macadam covering a thick layer of well consolidated stone ballast. Many of the rail joints are insulated, and extensive alterations have been made in the new layout to positions of these joints, so as to secure improved track circuiting. Mild-steel inserts provided at each side of the joints facilitate the fixing of track circuit and traction bonds.

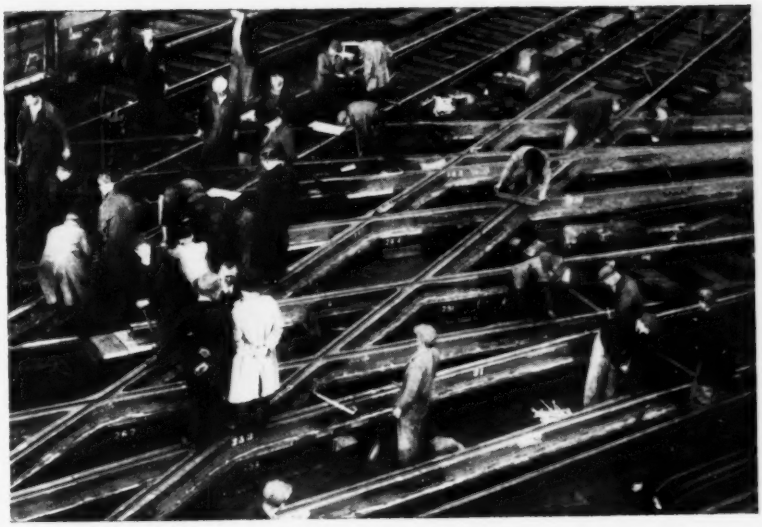
Preliminary Assembly

The whole of the steelwork was first assembled for inspection and checking at the layout ground of Hadfields Limited at Sheffield, and afterwards re-assembled on prefabricated beams at the North Eastern Region assembly ground at Low Fell, Newcastle, before being loaded into wagons for transit to the site. In carrying out the preliminary work accurate setting out and measurement was essential to ensure fitting and proper alignment with existing point and crossing work at the extremities of the renewal.

The manganese crossings were manufactured by Hadfields Limited, Sheffield, to the instructions of Mr. J. Taylor Thompson, Civil Engineer, North Eastern Region, British Railways, and the assembly of the crossings on the site was supervised by Mr. C. Haysey, District Engineer, Newcastle.

Layout of manganese-steel crossings on prefabricated beams at Low Fell Yard, Newcastle, prior to installation

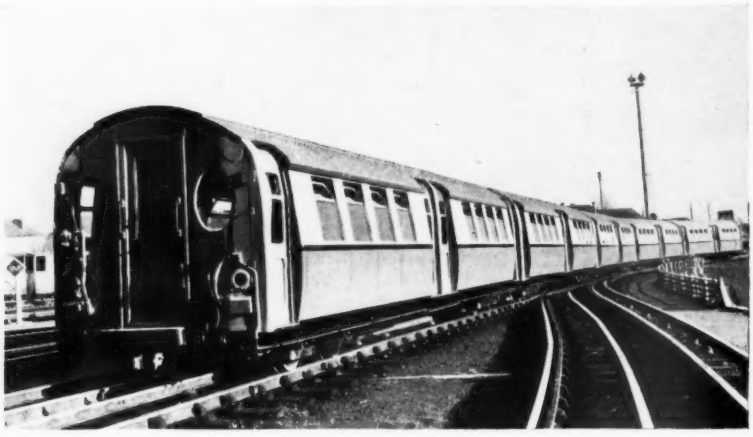
Laying the new crossings outside Newcastle Central Station



New sets of cast manganese-steel crossings in position on the up goods line at Newcastle, North Eastern Region

Staff Instruction Train, London Transport

Conversion of former tube cars for Rolling Stock Division staff training



AN instruction train for the staff of the Rolling Stock Division of the Chief Mechanical Engineer (Railways) is to be placed in service by London Transport in the near future. Whereas in the past, knowledge of the rolling stock and its equipment was obtained only by experience during normal duties, it will now be possible to supplement this experience by courses of instruction. The train, which will travel to the various depots, will be in charge of an instructor, who will arrange courses at each depot.

It is proposed to institute appropriate courses for all grades of the rolling stock maintenance staff and priority will be given first to carriage cleaners and examiners. A course will consist of six to ten sessions, according to the subject covered, and each session will be of two hours' duration; one hour will consist of theoretical teaching illustrated by drawings, diagrams, and photographs, and the remaining hour will consist of practical demonstration with equipment in the train. The courses of instruction will be given during normal working hours.

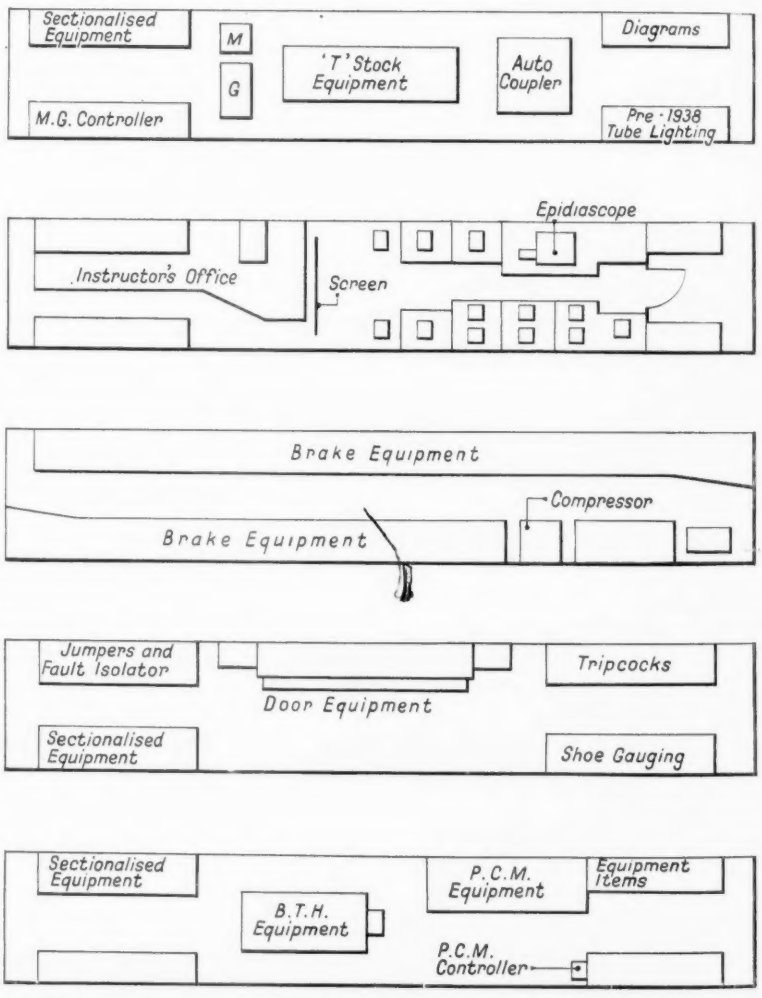
The train consists of five cars converted from tube-type trailers dating from 1919, which had been withdrawn from service for scrapping; the interior of each car has been entirely reconstructed for the purpose. One car is fitted out as a lecture room with blackboard, tiered seating for twelve students, and an epidiascope; the office is also in this car. The other four cars contain various items of equipment, among these being three complete sets of traction control equipment, each of a different type in common use, Westinghouse and electro-pneumatic brake apparatus of various types, the latest automatic coupler, and a pair of pneumatically operated doors.

Additional teaching aids are provided by cutaway items of equipment placed on benches, and wiring and other diagrams exhibited throughout the train. Perspex has been used to a considerable extent for the covers of equipment. Included in the train is a compressor of standard type, providing air for the pneumatically operated equipment, together with a motor generator which serves the dual purpose of supplying current for some of the electrical equipment, and for the fluorescent lighting installed in three of the cars.

The cars are numbered I.C. 1075 to I.C. 1079. The demonstration equipment in car number I.C. 1075 includes a Metropolitan-Vickers electro-pneumatic traction control equipment used on the Metropolitan Line electric coaching stock. For demonstration purposes special lights have been fitted to indicate the sequence of the contactors, which are illuminated as each contactor closes. The automatic wedge-block coupler in use on the latest tube and surface-line rolling stock is demonstrated by a fixed and movable coupler mounted on a stand; the movable coupler head is connected to an air cylinder so that the action of a moving train can be simulated.

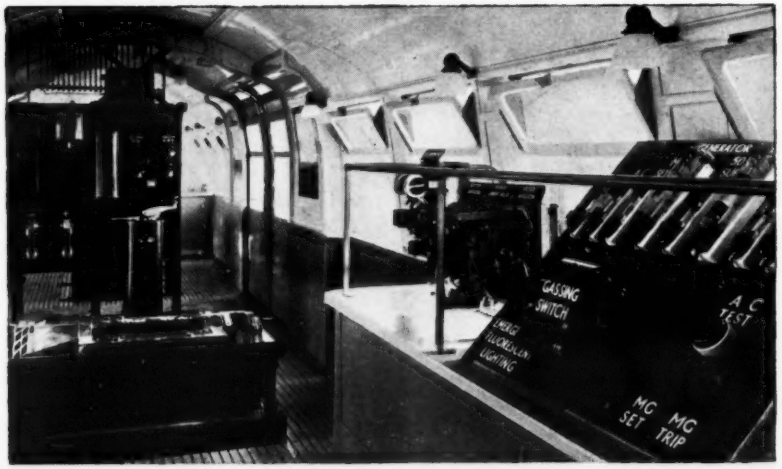
Coupler engine disconnecting units, latch valves, and marker lights are provided so that a complete sequence of operations carried out in actual practice can be demonstrated. Wired on a bench and fed from a 50-V. supply is a model of the lighting system used on the tube stock operating on the Piccadilly and Central Lines. The model shows the complete layout for a three-car unit and demonstrates the circuits and the method by which the current is fed to them. Faults can be set up on the model to give instruction in locating and correcting troubles which may be encountered in service. On the opposite side of the car, a bench, with the top as a blackboard, enables the staff to draw circuit diagrams, to assist them in learning their circuits and tracing faults. This car also houses a motor generator,

(*Continued on page* 594)

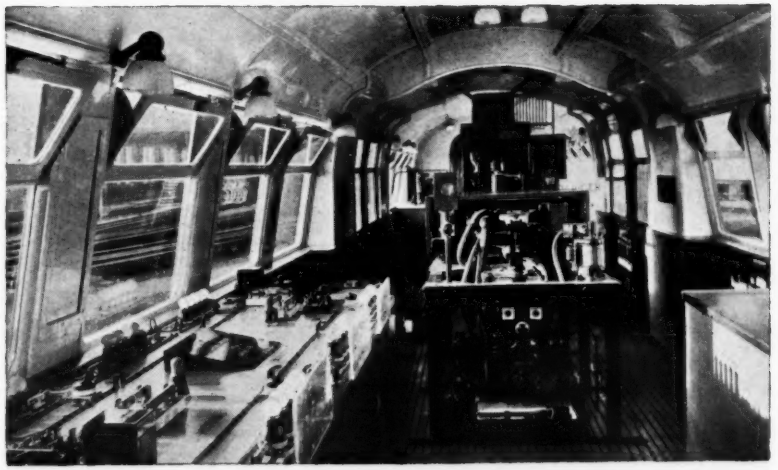


Layout of equipment in the five coaches of the London Transport instruction train

Staff Instruction Train, London Transport

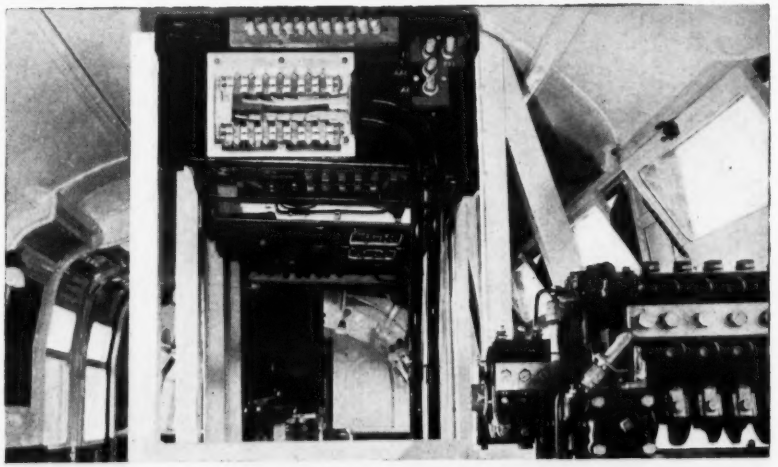


Electro-pneumatic traction control equipment



Model layout of lighting circuits for tube stock

Demonstration in progress in the lecture room



Traction control equipment as used on the latest tube stock

Lateral Removal of a Complete Signal Box

Unusual operation undertaken in a German marshalling yard in wartime so as to avoid track re-alignment

IN our German contemporary *Der Eisenbahnbau*, of July, 1949, appears a description of an engineering feat carried out during the construction of a new marshalling yard in Germany during the war—the wholesale removal, by 18 cm., of a new signal cabin weighing 800 *tonnes*.

The signal box concerned is of the cantilevered type, and is supported by a narrow base of 2·2 metres width which permits an axial distance of 6·6 metres between the two adjoining tracks. The narrow part contains the staircase and ancillary rooms. The concrete foundations enclose an air-raid shelter and are therefore carried down to a depth of four metres below rail level. The box is situated at the western end of the sidings, which are mainly in cutting, so that excavation works were required for their construction. The subsoil water level at that time was about 2 metres below rail level. To accelerate the completion of the yard, the signal box was constructed at the same time as the excavation works were proceeding, and in advance of certain drainage works, through which the subsoil water level was subsequently lowered. For this reason, the foundations were protected by a special waterproof insulation which became redundant when the drainage scheme was completed.

When the excavation works were completed, it was found that the longitudinal axis of the cabin building was out of alignment by 18 cm. The error may have been due to the repeated modifications of the scheme during the construction, but the responsibility has never been definitely established. Any re-alignment of the tracks had to be ruled out in view of the repercussions on the layout of the entire yard. The German engineer therefore conceived the idea of resorting to a wholesale lateral removal of the entire cabin. The idea was prompted by the fact that the air raid shelter gave easy access to the foundations, and that the redundant waterproof insulation offered a good base for a horizontal move. After consultations with experienced building contractors, the following procedure was adopted.

A curtain of steel sheet piling ("Krupp II") was driven parallel to the south side of the building, at a distance of 1·25 metres from the foundation, and to a depth of 2 metres below the foundation soil. The soil between this curtain and the foundation, as well as the soil along the other three sides of the building, was removed. The distance of 1·25 metres had been chosen to facilitate this excavation work. Two broad-flanged horizontal H beams were then fixed to the sheet piling and four hydraulic jacks installed between them and the concrete foundation, using blocks of hardwood to ensure close contact with the foundation. Each of the hydraulic jacks was put under pressure by small handpumps, operated by two men.

The move was carried out without difficulty in 1½ working days. Several times the jacks had to be moved forward by placing steel plates between them and the beams. The movements of the building were kept under constant observations by instruments. There was no lifting or any other vertical move. Small differences in the rate of progress at the two ends could easily be adjusted by the temporary stoppage of one jack. No cracks or other damage occurred at the foundation, but, as was to be expected, the waterproof insulation layer, along which the movement took place, was destroyed. After completion of the move, two coats of waterproofing paint were applied. Finally, the sheet piling was removed and the soil filled in.

Site prepared for commencement of lateral removal of box

Steel sheet piling in front of box foundation block

We are indebted to *Der Eisenbahnbau* for the illustrations reproduced above.

Staff Instruction Train, London Transport

(*concluded from page* 592)

together with a 23-cell accumulator, which provides a 50-V. d.c. supply for operating equipment and the emergency lighting. The motor generator also supplies alternating current at 110 volts and 850 cycles for the fluorescent lighting in three of the cars.

Car number I.C. 1076 is allocated to the lecture room in which the tubular frame seats are so arranged that there is an uninterrupted view of the blackboard and epidiascope screen from every position. Black curtains are provided for darkening the room. At one end of the car, adjacent to the lecture room, is a small cloakroom.

Car No. I.C. 1077 contains different types of Westinghous brake equipment, including automatic brake, electro-pneumatic brake with retarder control, electro-pneumatic brake with regenerative brake, and electro-pneumatic brake with self-lapping controller. The car also contains a standard CP.28 air compressor which supplies the compressed air required throughout the train.

Car No. 1078 contains a pair of pneumatically operated doors, mounted in such a way that the working of the door engine and interlocks can be examined. The mechanism includes the guards door control box, and passenger push-button control, the type already in use on the Central Line, and which is being introduced progressively on the other lines. The various types of axleboxes are shown mounted on journal ends so that staff can be taught the correct method of packing axleboxes.

Trip-cock and shoe gear is demonstrated by means of the mounting of a trip-cock and positive and negative collectors in their exact positions in relation to dummy rails. The apparatus has, therefore, the same aspect as when viewed from an inspection pit. This car also includes dummy car ends, with the jumpers between the cars, and other apparatus to demonstrate the different methods of isolating electrical faults on one car from an adjoining car.

Car No. I.C. 1079 contains two complete sets of traction control equipment. One is the older B.T.H. type with electro-pneumatic contactors, which is in use on the District and some of the older tube rolling stock, and the other the B.T.H. P.C.M.-type control equipment with cam-operated contactors, installed in the latest type of tube stock and on the new surface line stock shortly to be brought into service. The older B.T.H. equipment has been fitted with a special type of indicator to show the sequence of the contactor operation. This takes the form of a wiring diagram of the power circuit in which the contactors are represented by lamps. As each contactor closes, the appropriate lamp lights up, so that the circuit can be traced on the diagram at each successive stage of the operation. The P.C.M. equipment, which is normally carried underneath a car, is mounted for demonstration purposes at such a height that it presents the same aspect as to a man working in a pit. The underside is floodlit.

The train was designed, and the work of converting the cars was carried out, entirely by staff in the department of the Chief Mechanical Engineer (Railways) under the direction of Mr. W. S. Graff-Baker, Chief Mechanical Engineer.

RAILWAY NEWS SECTION

PERSONAL

Chief Regional Officers

The Railway Executive announce that, with the concurrence of the British Transport Commission, the following appointments are being made consequent on the retirement at the end of this year of Mr. G. L. Darbyshire, Chief Regional Officer, London Midland Region:—

Mr. John Elliot, Chief Regional Officer, Southern Region, to be Chief Regional Officer, London Midland Region, Euston.

Mr. C. P. Hopkins, Chief Regional Officer, North Eastern Region, to be Chief Regional Officer, Southern Region, Waterloo.

Mr. H. A. Short, Chief Officer, Railway Executive Headquarters, to be Chief Regional Officer, North Eastern Region, York.

These appointments will take effect on January 1, 1950.

Lord Latham, Chairman of the London Transport Executive, has accepted the Presidency of the Railway Convalescent Homes for 1950, in succession to Sir Eustace Missenden, Chairman of the Railway Executive.

Mr. H. E. Parkes has been re-appointed a permanent Member of the Transport Tribunal for a further period expiring on May 3, 1950.

We regret to record the death on November 14, at the age of 78, of Viscount Runciman of Doxford, a former Director of the London Midland & Scottish Railway Company.

It was notified recently in *The London Gazette*, under the heading of Territorial Army—Royal Engineers: Engineer & Railway Staff Corps, that Lt.-Colonel O. V. S. Bulleid resigns his commission, September 30, 1949, retaining the rank of Lt.-Colonel. Colonel Bulleid recently retired as Chief Mechanical Engineer, Southern Region, British Railways, and is now Consulting Mechanical Engineer, Coras Iompair Eireann.

Mr. Shirley James, of Shirley James' Travel Agency, is visiting Canada on business.

Mr. George Cardwell, Chairman of the Road Passenger Executive, and Members of the Executive are visiting East Anglia to inaugurate consultations with local authorities on the proposed Eastern Area scheme for passenger road transport.

RHODESIA RAILWAY BOARD

The new Railway Board provided for by the Rhodesia Railways Act has been appointed, and consists of Sir Clarence Bird (Chairman), Mr. J. S. H. Grant (Vice-Chairman), Mr. H. T. Low, Sir Harold Cartmel Robinson, Mr. N. Cook and Mr. A. H. Strachan. Mr. R. A. Walters is Secretary of the Board. The new Act came into full operation as from November 1.

Mr. W. J. Parker has been appointed a Director of Canadian National Railways for a three-year term, in place of Mr. E. J. Young, whose term has expired.

Mr. Ezatollah Hedayat, Director-General of the Persian State Railways, has recently paid an official visit to this country. During his stay he completed negotiations for an important contract for locomotives to be built in Great Britain. The two British firms which are involved in the negotiations are Beyer, Peacock & Co. Ltd. and the Vulcan Foundry Limited.

Photo [*Lafayette*

Mr. Ezatollah Hedayat

Director-General, Persian State Railways, who recently paid an official visit to this country

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Sir Maurice Drummond Peterson has been elected a member of the board of the Midland Bank Limited.

Mr. N. G. Lancaster, who was elected to the board of Tube Investments Limited in April, 1949, has been appointed an Assistant Managing Director.

Mr. R. D. Jackson, Assistant Secretary of the Mersey Docks & Harbour Board, has retired, and has been succeeded by Mr. A. Mountfield.

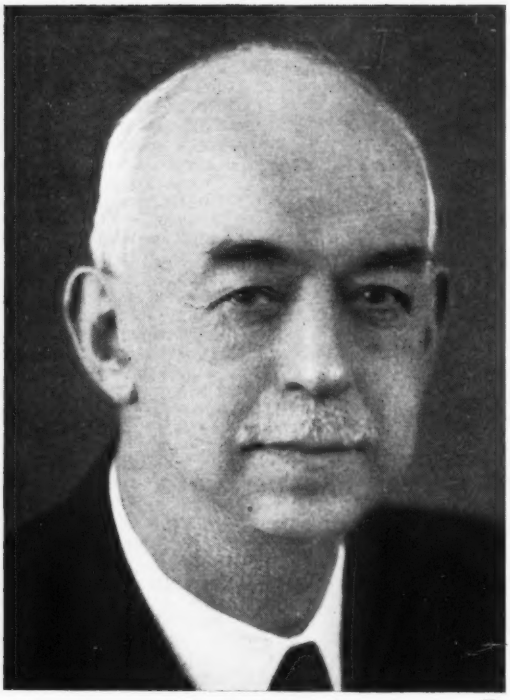
The late Mr. William Baird, who was Special Representative in London of the Chairman of the Canadian Pacific Railway, and sometime President of the Canadian Railway Club, left (estate in England) £1,038.

Mr. G. L. Darbyshire, C.B.E., M.Inst.T., Chief Regional Officer, London Midland Region, British Railways, who is retiring at the end of this year, joined the L.N.W.R. at Crewe in 1898, and was appointed Chief Staff Clerk in the Divisional Superintendent's Office at Liverpool in 1910. Nine years later he was transferred to the Staff Department of the General Manager's Office at Euston, and he became Chief Officer for Labour & Establishment of the L.M.S.R. in 1930. In 1939 Mr. Darbyshire was made a member of the L.M.S.R. Executive Committee. During the recent war he acted as Chairman of the Railways Staff Conference and of the Staff Committee of the R.E.C. In 1943 he was appointed a Vice-President of the L.M.S.R., becoming Acting President in 1947, and Chief Regional Officer of the London Midland Region of British Railways in 1948. He was made an O.B.E. in 1939, and a C.B.E. in 1945.

Mr. John Elliot, M.Inst.T., Chief Regional Officer, Southern Region, British Railways, who has been appointed Chief Regional Officer, London Midland Region, as from January 1 next, was born in 1898, and was educated at Marlborough and the Royal Military College, Sandhurst. He served in the 1914-18 war, and resigned his commission in 1920 to take up journalism. He joined the Southern Railway in 1925, and became Development Officer in 1930, Assistant Traffic Manager in 1933, Assistant General Manager in 1937, Deputy General Manager in 1939 and Acting General Manager in 1947. On the nationalisation of the railways on January 1, 1948, Mr. Elliot was appointed Chief Regional Officer of the Southern Region. He was closely associated with the organisation of the railway-operated air services, and is a Director of Thos. Cook & Son Ltd., and of various railway-associated road transport companies. He has studied transport in America and Canada. He is a Lt.-Colonel in the Engineer & Railway Staff Corps. Mr. Elliot holds the U.S.A. Medal of Freedom with bronze palm. In March of this year he visited Australia at the invitation of the Victorian Government to report generally on the Victorian Government Railways.

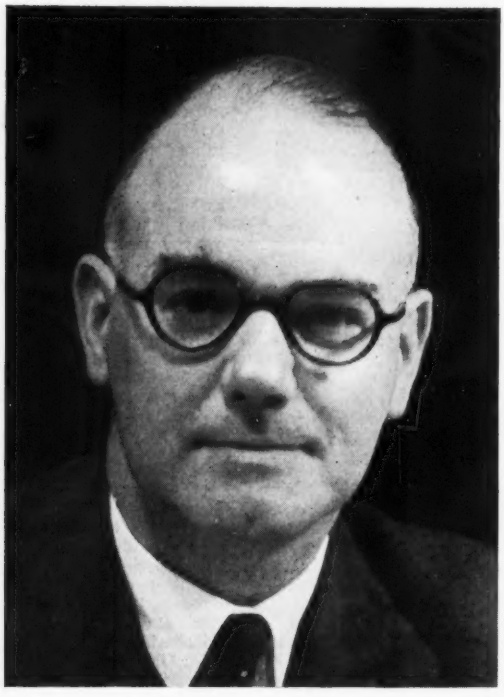
Mr. C. P. Hopkins, M.Inst.T., Chief Regional Officer, North Eastern Region, British Railways, who has been appointed Chief Regional Officer, Southern Region, as from January 1 next, was educated at Archbishop Holgate's Grammar School, York, and entered the service of the North Eastern Railway in 1916. He gained experience in various districts, and was awarded a traffic apprenticeship in 1921. After a period of special training, he served for some time with the then newly-centralised freight rolling stock organisation of the L.N.E.R., becoming its Chief Supervisory Clerk in 1929. He was appointed Traffic Assistant to the Conti-

Chief Regional Officers



Mr. G. L. Darbyshire
Chief Regional Officer, London Midland Region, who retires at the end of this year

Mr. John Elliot
Appointed Chief Regional Officer, London Midland Region, as from January 1 next



Mr. C. P. Hopkins
Appointed Chief Regional Officer, Southern Region

Mr. H. A. Short
Appointed Chief Regional Officer, North Eastern Region

nental Traffic Manager, London, in 1932, and in 1937 became General Assistant to the Superintendent (Eastern Section), Southern Area. In 1939 he was appointed Staff Assistant, and later General Assistant, to the Superintendent, Southern Area, and, in 1941, Assistant Rolling Stock Controller, York. He was transferred to the L.N.E.R. Headquarters as an Assistant to the Chief General Manager in 1943, and in 1946 became Assistant General Manager (Traffic & Statistics). On the formation of the North Eastern Region of British Railways in January, 1948, Mr. Hopkins was appointed its first Chief Regional Officer.

Mr. H. A. Short, C.B.E., M.C., M.Inst.T., who has been appointed Chief Regional Officer, North Eastern Region, British Railways, as from January 1 next, is at present a Chief Officer at Railway Executive Headquarters. He was educated at Bournemouth School, and joined the L.S.W.R. in 1913. From the outbreak of war in 1914 until 1919 he served with the Suffolk Regiment. On rejoining the L.S.W.R. he was made an Outdoor General Assistant, and in various capacities up to 1936 he gained experience in the Operating and Commercial Departments of the L.S.W. and Southern Railways, representing the latter (when Road Transport Liaison Officer) as a Director of several associated road companies. In 1936 he was made Assistant Docks & Marine Manager. He became Docks & Marine Manager in 1941, and while in that appointment was Chairman of several bodies connected with port affairs. In 1945 he was made Deputy Traffic Manager of the Southern Railway, and he assumed his present position in January, 1948. He is a former Member of Council of the Institute of Transport, and a former Member of Council of the Chamber of Shipping, and is at present a Director of several bus companies associated with British Railways. Mr. Short has visited Argentina, also Singapore and Malaya, his services having been lent by the Southern Railway to the Argentine Government and the Colonial Office, respectively, to advise on general transport problems. He was awarded the Military Cross and mentioned in dispatches, during the 1914-18 war, and received the C.B.E. and U.S.A. Medal of Freedom (silver palm) for services during the recent war. He is a Lt.-Colonel (Brevet Colonel), R.E. Reserve of Officers, having had command of the Southern Railway Group, R.E. (Supplementary Reserve), for several years up to 1937.

We regret to record the death on November 9, at the age of 61, of Mr. John Charles Jenkins, lately General Manager, Nitrate Railways.

Dr. L. G. Norman, Chief Medical Officer of the London Transport Executive, has been elected President of the Association of Industrial Medical Officers.

LONDON MIDLAND REGION STAFF CHANGES

Mr. D. W. Elliker, Assistant to Accountant (Book-Keeper), Euston, to be Assistant Accountant, Euston.

Mr. C. J. Chaplin, District Engineer, Bradford, to be Assistant Engineer (Maintenance), Euston.

Mr. F. W. Moxon, Assistant District Goods Manager, Broad Street, to be Cartage Assistant to Commercial Superintendent, Euston.

Mr. W. Alexander, Senior Mining Engineer's Assistant, Civil Engineer's Department, Derby, to be Mining Assistant, Civil Engineer's Department, Derby.

Mr. R. Lawrence, Yardmaster, Colwick Sidings, to be Assistant to District Operating Superintendent, Birmingham (Midland).

War Memorial Ceremony at Paddington

The new inscriptions on the war memorial at Paddington Station, including references to the second world war, were unveiled by Sir James Milne, who was General Manager of the former Great Western Railway Company, on November 11 at a simple service of commemoration held on No. 1 platform. A Roll of Honour, in illuminated lettering, of the names of the men and women of the staff of the Great Western Railway who gave their lives in the recent war had previously been placed within the cavity in the memorial, immediately below the figure of the soldier, where a similar Roll of Honour of the names of the staff of the company who died in the 1914-18 war already rested.

The service was conducted by the Reverend G. T. Chappell, Vicar of Paddington, and the singing of the hymn "O God our Help in Ages Past" was led by a small choir under the direction of Mr. Stanley Chevins. After the unveiling of the tablets, wreaths were deposited on the memorial by Mr. K. W. C. Grand, Chief Regional Officer, Western Region, on behalf of the chief officers, and by Mr. F. R. E. Davis, Secretary of the company, on behalf of the former directors. The sounding of the Last Post and Reveille by a bugler from the 625 L.A.A. (3rd City of London) Regiment, followed, and the service concluded with the Lord's Prayer, the Blessing, and the singing of "God Save the King."

Many officers of the former Great Western Railway, either retired or now holding other transport appointments, were also present, with departmental officers of the Western Region and representatives from the employees' side of the Sectional Councils and Works Line Committees, as follow:—

Officers of former G.W.R.: Messrs. D. Blee, H. H. Phillips, G. E. Orton, Leslie Ford, F. Weller, S. B. Taylor, Dr. H. H. Cavendish Fuller, Mr. M. H. B. Gilmour, Dr. F. F. C. Curtis, Messrs. A. E. C. Dent, F. H. D. Page, H. W. Croft, W. P. Keith, A. Lane.

Western Region Departmental Officers: Messrs. C. R. Dashwood, Chief Accountant; M. G. R. Smith, Assistant Civil Engineer (also representing Mr. A. S. Quartermaine, Chief Engineer); G. Matthews, Operating Superintendent; C. Furber, Commercial Superintendent; R. Burgoyne, Regional Staff Officer; R. Chitty, Solicitor; F. C. Hockridge, Surveyor & Estate Agent; Dr. C. T. Newnham, Medical Officer; Messrs. A. W. Woodbridge, Signal & Telegraph Engineer; C. H. T. Morgan, Assistant Engineer (General) (also representing Mr. F. W. Hawksworth, Chief Mechanical Engineer); H. R. Webb, Stores Superintendent; C. W. James, Acting Stationery Superintendent; G. S. Halliday, Road Motor Engineer; W. N. Connah, Treasurer; Major J. Dewar, Public Relations & Publicity Officer.

Sectional Councils, Line Committees, etc.: Messrs. H. Edwards, S. Douglas, J. B. Watts, A. E. Ash, C. D. Higgs, M. P. Murphy, E. Williams, J. W. Stafford, E. Clack, S. Rice, J. Rees, W. H. Vaughan, A. Voisey, W. H. Yobsley, S. W. J. Walker, A. G. Jordan, R. Brunot, F. Morgan, T. Tonkinson, A. W. Lander, G. James, A. C. Goodsell, G. H. Martin, C. H. Lee.

Sir James Milne, General Manager of the former Great Western Railway, unveiling the additional inscriptions (see article above)

Ministry of Transport Accident Report

Glasgow Cross, Scottish Region, British Railways: January 31, 1949

Lt.-Colonel G. R. S. Wilson, assisted by Colonel R. J. Walker, Inspecting Officers of Railways, Ministry of Transport, inquired into the accident which occurred at about 9.2 a.m. on January 31, 1949, at Glasgow Cross Station, when the 8.51 a.m. passenger train from Rutherglen to Clydebank, consisting of seven bogie coaches, drawn by a Class 4P 2-6-4 tank engine, running bunker first, passed three signals at danger at Glasgow Green and the home signal for Glasgow Cross, and collided with the 8.10 a.m. passenger train, Shotts to Glasgow Central (Low Level), standing at the platform. This train was composed of three bogie coaches, drawn by a Class 3 2-6-2 type tank engine.

The lamp in the Glasgow Green home signal was out, with several parts missing, but the light indicator in the signal box was showing "in" irregularly. All other signal lights were burning. (The Glasgow Cross home signal has electric light.) It was a dull, damp day, with much smoke and steam hanging in the tunnels, and visibility was very bad.

Signalling is by Tyer's lock-and-block, under which the section signal is front-locked to the block instrument and back-locked until "train on line" has been taken correctly by the box in advance. Another train cannot be accepted unless the lever is replaced fully and the home signal lever is normal. The block is held at "train on line" until a treadle is actuated at the outgoing end of the section or, as at Glasgow Cross, the train has occupied and cleared a track circuit. The use of the cancelling key involves the co-operation of the signalmen on *both* sides of a signal box.

The accompanying diagram shows the lines, signals, etc., essential to an understanding of the case.

Evidence

Rule 39(*a*) is not applied at the home signals at the entrance to these underground stations. The relevant instruction at Glasgow Green reads:—"When the 'Is line clear?' signal for an up or down train has been forwarded to, but not acknowledged by the signalman at the box in advance, the train may be allowed forward to home No. 2 signal without being brought quite or nearly to a stand at home No. 1 signal so as to avoid the train coming to a stand in the tunnel."

It is in consequence a rare experience for a driver to find such a signal against him.

The first train was not booked to stop at Glasgow Cross but was held there awaiting "line clear." The colliding train was not booked to stop at Glasgow Green, but was due to call at Glasgow Cross. The signalman at Glasgow Green accepted it at 8.58 a.m., thereby proving his three stop signals at danger and distant at caution. He saw the train emerge from the tunnel and expected it to stop at the second home signal on the platform, just beyond his box. (He had not taken advantage of the exemption from Rule 39(*a*)). The train continued on and he managed to attract the guard's attention by whistling but could not make him understand the reason. He lost no time in sending "vehicles running away" at 9.1 a.m., on hearing which the signalman at Glasgow Cross telephoned to Glasgow Central and ran out and put down three detonators 70 yd. in rear of the waiting train. The other train could be heard coming. Passengers were trying to board the Shotts train under the wrong impression that it was the Rutherglen train, and the signalman's very prompt action enabled the staff to warn persons to stand clear and prevent more numerous and serious injuries. The evidence given by the train crews was clear and straightforward.

A passed fireman was driving the first train. Approaching Glasgow Green, he was unable to see the first home signal for smoke and steam, but stopped, as booked, at the second one. On leaving he noted the Glasgow Cross distant "on" and finding the home signal "off," drew forward to the starting signal.

The driver of the train from Rutherglen, an experienced man with a thorough knowledge of the line, saw Glasgow Green distant against him but missed all its other signals because of smoke and steam. He looked for the signalman, from whom he was accustomed to receive a hand signal, but saw no sign of him through the smoke. He admitted that he took a chance, in contravention of Rule 25. He saw the lights of the speed restriction board but not the home signal at Glasgow Cross. He heard the detonators, but for the moment was not sure whether they were an emergency signal or to give further warning of the restriction. He saw the other train immediately after hearing the signalman's whistle; he was preparing to stop as booked.

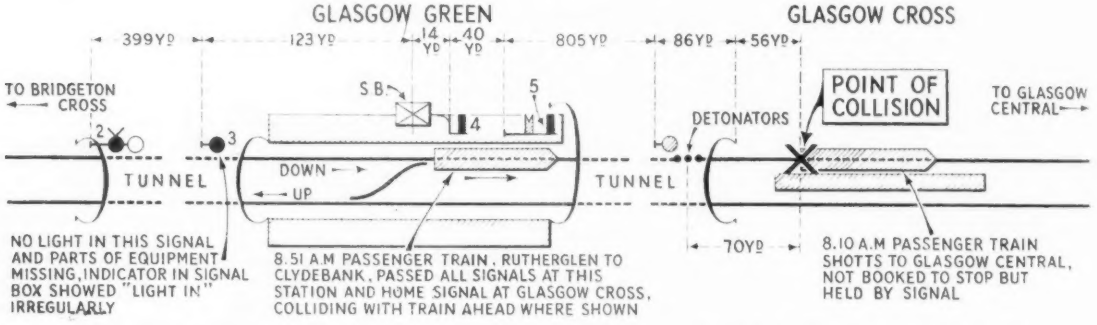


Diagram illustrating circumstances of collision at Glasgow Cross, Scottish Region, January 31, 1949

Damage to rolling stock was not severe, but 78 passengers complained of injury or shock. Of 72 taken to hospital only two were detained. Assistance was promptly rendered and the line was open again to normal working by 4.0 p.m.

Features of the Line

The line runs underground through the centre of Glasgow and carries 46 up and 48 down passenger trains between 5.0 a.m. and 10.0 p.m., with morning and afternoon peaks. It is open throughout the 24 hours and is used in addition by 12 up and 9 down freight trains. During the hour preceding the accident seven up and six down trains had passed and atmospheric conditions were, if anything, worse than usual. Timings are easy and speeds low. There was a 15 m.p.h. relaying restriction in force through Glasgow Cross Station. Down trains approach Glasgow Green on an easy left-handed curve, followed by a right-handed curve through the station. The following tunnel is straight but just beyond it is a sharp left-handed curve, and the standing train could only have been seen at short range from the colliding engine. This tunnel begins with an up gradient, 1 in 196 for 300 yd., and is then level for 98 yd. There follows a down grade of 1 in 105 for 374 yd, followed by level track to the end of the tunnel. After that the gradient falls at 1 in 87 to the point of collison.

Neither fireman nor guard knew the line well. The former saw no signals, but the latter heard the signalman's whistle at Glasgow Green. By the time he opened his window the train was in the tunnel again. He thought the signalman might have seen an open door, and did not apply the brake.

The Extinct Home Signal

Evidence as to how long the No. 1 home signal at Glasgow Green had been out and essential parts of the lamp missing was inconclusive. The District Inspector (Operating), accompanied by the guard of the Rutherglen train, two hours later found the lamp cold and the glass chimney and filler cap missing. The oil cistern was full. The whole lamp and case were dirty and sooty, but when relighted and the lens cleaned it gave a fair light. The signalman was surprised at the circumstances as his indicator showed "in." A lineman found the pyrometer missing and a screw from one of the contact pieces to be missing also, allowing them to touch and close the circuit irregularly. He was certain that the pyrometer was present, properly connected, at his last inspection between January 11 and 13. He was not sure about the chimney or filler cap. When he found chimneys missing occasionally he reported to the station staffs, responsible for replacements. After dealing with lamps he invariably tested the

repeater circuits, and did so on this occasion, with quite satisfactory results.

A porter at Glasgow Green, aged 20, with two months service, dealt with the cleaning, etc., of the lamps at the east end of the station every Tuesday. Another porter had shown him what to do but he had not received the official instructional booklet covering oil lamps. Only recently had he read the corresponding card in the signal box. He was positive the lamp had neither chimney nor filler cap six days before the accident and that they had never been there the whole period he had been cleaning it. None of his other lamps had glass chimneys; he did not know they should have them. When shown a pyrometer, he said he had never seen anything similar in the lamp and was practically certain it had never been there. The wires were always loose and unattached in his experience. He knew the lights were repeated but did not know how that was done.

The stationmaster at Glasgow Cross and Glasgow Green regarded the signalman as responsible for seeing the lamps received proper attention. He occasionally inspected the lamps outside the tunnels. If they were in order he assumed the others would be. It was not his duty, he considered, to walk inside the tunnels if he could avoid it.

Colonel Wilson inspected the lamp and obtained confirmation of its unsatisfactory condition. It had not received proper attention for a long time. The electrical signal and telegraph inspector said the screw might have been broken by clumsy handling when replacing the lamp. He referred to the rapid corrosion met with in tunnels and considered the lineman's statement that the repeater circuit was in order at his inspection three weeks before as reasonable, but could not explain how the pyrometer, which was never found, could have fallen out of the lamp unnoticed. This was his first experience of a wrong side light repeater failure because of loose contact pieces on the lamp bracket.

The mechanical signal and telegraph inspector, with a locomotive inspector, carried out an annual lamp inspection from the footplate in November, 1948. Travelling in both directions between Rutherglen and Balloch he found 19 lamps out and six giving a poor light, but none was in a tunnel. He had, however, been unable to see all the tunnel signals. He had only recently come to the Glasgow district, and drew an unfavourable comparison with his experience elsewhere.

Inspecting Officer's Conclusion

Colonel Wilson is satisfied that block working was carried out correctly and that the Rutherglen train passed four stop signals at danger. Its driver was therefore solely responsible for the collision. He admitted he missed the signals and took a chance.

He is a man of 52 and has an excellent record, with 20 years as driver and a long experience of this underground line.

The fact that a driver with this record and experience should have failed so seriously and in such an elementary way seems to throw some doubt on the adequacy of the signalling arrangements under the prevailing conditions. It appears that the low power of badly maintained oil lamps and the smoke and steam in the tunnels may have led to a situation in which signals are often missed by drivers, who may have formed the habit of expecting and relying on a hand signal from the box.

It is doubtful whether the failure of the lamp had much bearing on the accident. Under the exemption from Rule 39(*a*) it was seldom or never seen at danger and cannot have had much significance for the drivers of passenger trains. There may have been some tendency to disregard it, as no report about its light was received from any driver, though it had probably been out for some days. Nor did it seem that the signalman was much disturbed until the train passed the second home signal, on the platform.

Nevertheless, the failure of the lamp and the evidence of the mechanical inspector brought to light the acceptance by all concerned of a deplorably low standard of maintenance and cleaning. The condition of the lamp, when Colonel Wilson saw it, was clearly the accumulated effect of many months of neglect and he disagrees with the electrical inspector's view that there were reasonable grounds for accepting the lineman's statement that the repeater circuit was in order three weeks before. The pyrometer was too large a fitting to disappear without being noticed and Colonel Wilson relies on the porter's evidence regarding its absence.

This man's evidence was straightforward. He admitted he took no steps to replace filler cap or chimney, without which the lamp could not have given its full power, even if alight. It was obvious that he had little or no idea of the standard of attention normal and necessary with railway signal lamps, but this was not to be expected from a young man, with only two months' service, who had never been properly instructed or supervised. The stationmaster had evidently not appreciated his responsibilities in this connection, and the state of the light repeater circuit was no credit to the signal maintenance staff.

Colonel Wilson does not overlook the fact that the conditions in the tunnels are unpleasant and difficult, for both ground staff and train crews, and no doubt lamps corrode, soot up and become generally dirty with disheartening rapidity. This is not, however, a reason for accepting defeat and neglecting them, but all the more reason for ensuring that they are maintained to the highest standard of efficiency and cleanliness. Appropriate action has now been taken.

Remarks and Recommendations

The direct cause of the accident was a serious and unusual lapse of an experienced driver, after observing the distant signal at caution. His failure, though inexcusable, may have been due in some measure to the conditions under which he had to work. Ventilation on this line has been unsatisfactory for a long time and its improvement, difficult and costly, would be only a palliative. The obvious remedy would be to eliminate steam haulage. This is beyond the scope of Colonel Wilson's present report; the tunnel sections cannot be considered in isolation from the remainder of the Glasgow suburban system.

The "main line" character of the route would also preclude the installation of train stops at the signals, but it seems likely that the accident might also have been prevented by a detonator placer worked from Glasgow Green box, as the signalman was alert. This simple and inexpensive equipment would appear to be of particular value as an emergency safeguard in the prevailing circumstances. Special consideration should be given to its installation at Glasgow Green and at other signal boxes on the underground section in advance of the general programme which is in hand for such work.

Early consideration also should be given to the substitution of colour-light signals for the present oil-lit semaphores; apart from the much better visibility of such signals, the difficulties of efficient day-to-day maintenance should be far less. A complete scheme of multi-aspect signals through the tunnel sections, with continuous track circuiting, would be preferable, but if this cannot be undertaken at present, as an immediate and much less costly improvement, the existing signals should be converted to colour-lights, retaining for the time being the Tyer's lock-and-block system of operation. Although the apparatus is old-fashioned, it affords considerable protection against mistakes in block working, especially as the arrangements for its release in emergency require the co-operation of the signalmen on each side.

If the latter course is taken, the layout of the signalling should be reviewed with particular reference to the need for retaining the up and down home signals in the tunnels at the entrance to Glasgow Green and other stations on this line. They do not appear to serve any practical purpose for through running, as Rule 39(*a*) is not applied, for the reason that it is undesirable to stop a passenger train in a smoky tunnel at the entrance to a station. As was mentioned in the report on the accident at Stobcross in February, 1939, signals at which trains are seldom or never stopped may tend to lose their significance, especially when they are often obscured by smoke and steam, with bad psychological effects on the footplate staff.

Scammell Lorries Staff Dance and Cabaret.—The annual ball and cabaret organised by the staff of Scammell Lorries Limited will be held at the Town Hall, Watford, on November 25, from 8 p.m.-2 a.m. The function is entirely self-supporting and local charities will again benefit. Business friends and associates will be welcomed. Tickets, £1 1s., inclusive of running buffet, can be obtained from Mr. L. N. Wood, Scammell Lorries Limited, Watford, Herts.

Scottish Motor Traction.—The directors of the Scottish Motor Traction Company recommend a dividend on the ordinary stock of 12½ per cent., less tax, for the year ended September 30. The British Transport Commission has waived any claim to the dividend in respect of the ordinary stock standing in its name, and the dividend is payable, therefore, only on £502,989 of stock held by the public. Owing to the change in the trading position, no figures will be issued until the report is circulated early in December.

Institute of Transport, Victorian Section.—At a luncheon held in Melbourne on October 28, the Victorian Section of the Institute of Transport was inaugurated. The function was attended by some 150 persons, including the Victorian Minister of Transport and leading personalities connected with railway, tramway, shipping, road, and air transport, as well as Government authorities concerned with transport, chambers of commerce, and the university faculties in commerce. The Chair was taken by Mr. N. C. Harris, who is retiring shortly from the office of Chairman of Commissioners, Victorian Government Railways. A message from Brigadier-General Sir Osborne Mance, President of the Institute of Transport, was read, and an address on the Institute was given by Mr. L. A. Schumer, the Honorary Secretary of the Section.

Road Haulage Executive Negotiating Machinery

An agreement was made on July 28, 1949, in pursuance of Section 95(1) (*a*) of the Transport Act, 1947, between the Road Haulage Executive and certain trade unions to establish machinery for the negotiation of terms and conditions for employees of the Road Haulage Executive, with provision for arbitration. The unions concerned were: The Amalgamated Engineering Union, the Electrical Trades Union, the National Union of Vehicle Builders, the R.C.A., the Scottish Horse & Motormen's Association, the Transport & General Workers' Union, and the United Road Transport Workers' Association of England.

The agreement provides for a National Staff Council, three National Joint Negotiating Committees, Divisional Joint Committees for each of the Divisions of the Road Haulage Executive, and Local Joint Committees for such areas as may be defined by the appropriate Divisional Joint Committees. The constitution, objects, and functions of these bodies are set forth below.

National Staff Council

(*a*) To ensure that the machinery at Divisional and lower levels provided for in the memorandum of agreement is properly maintained.

(*b*) To consider such cases as may be referred to it by the National Joint Negotiating Committees.

(*c*) To refer to National Joint Negotiating Committees any matter which will assist the carrying out of the functions of the National Council.

(*d*) To give guidance if required on any matter referred by a National Joint Negotiating Committee.

(*e*) To make uniform regulations for the election of representatives for the Local Joint Committees.

(*f*) To consider measures for encouraging the inclusion of the staff of the Executive in their appropriate trade union, and for securing the loyal observance by them of trade union agreements.

(*g*) To call for and consider statistics and information on the conditions of employment in the industry or in any other industry.

(*h*) To enquire into special problems concerning conditions of employment in the industry in Great Britain and in other countries.

(*i*) To consider any matters concerning conditions of employment that may be referred to the National Council.

The constitution of the National Council provides for a maximum of 24 representatives, 12 from the Road Haulage Executive and 12 from the trade unions. The Council has joint secretaries, one nominated by the Executive and the other by the unions.

National Joint Negotiating Committees

(*a*) To settle by negotiation the conditions of employment of workers with basic rates up to £630 a year, one National Committee being responsible for each of the following groups of grades:—(i) operating and ancillary; (ii) maintenance and repair; and (iii) administrative, professional, technical, supervisory and clerical.

(*b*) To consider, approve, or refer back the minutes of, or reports or recommendations made by, Divisional Committees, and to give a decision on any matter upon which a Divisional Committee may have failed to agree.

(*c*) To consider matters concerning conditions of employment in the industry or in any other industry or referred to the National Committees by the National Council.

The constitution provides for a National Committee comprising equal numbers of Executive and trade union representatives in respect of the three groups of grades referred to in (*a*) above. Each National Committee has joint secretaries, one nominated by the Executive and the other by the unions.

If any National Committees cannot determine any matter falling within their scope, they must at the request of a majority of either the Executive representatives or the union representatives refer the difference to the National Council for consideration, or to the Industrial Court or to any other agreed tribunal for arbitration, and any decision made in relation to the difference is binding upon the Executive and upon the unions and their members. There must be no lock-out, or withdrawal of labour, or interference with the workings of the Executive, until this machinery has been fully utilised.

Divisional Joint Committees

(*a*) To ensure that the conditions of employment settled from time to time by negotiation, conciliation or arbitration through the machinery of the National Committees are observed in the Divisions by the Executive and by the unions and their members.

(*b*) To consider any matters concerning conditions of employment referred to each Divisional Committee by its respective National Committee.

(*c*) To enquire into any difference that may arise between the Executive and the unions concerning conditions of employment of workers in the Divisions, and in connection therewith:—(i) To investigate the full facts as affecting all the parties between whom the difference has arisen in order to arrive at an agreed decision for the settlement of such difference; (ii) to make and communicate to the parties the decision of the Divisional Committee thereon; (iii) to use all available means for settling the difference; and (iv) to refer the difference to the appropriate National Committee at the request of a majority of either the Executive representatives or the union representatives in case the Divisional Committee are unable to settle it.

(*d*) To establish such Co-ordinating Committees representive of Divisional Committees as may be necessary for the purpose of making recommendations on matters agreed as common to all Divisional Committees.

(*e*) To define the areas of Local Joint Committees, hereinafter referred to, to be established in the Divisions so as to secure convenience of administration and adequate representation of the Executive and its various grades.

(*f*) To establish within six months from January 1, 1950, Local Joint Committees for the areas to be defined under (*e*) above.

(*g*) To give advice and assistance to Local Joint Committees where necessary.

(*h*) To consider, approve, or refer back the minutes of the proceedings of the Local Joint Committees in the Division.

(*j*) To give a decision on any matter upon which a Local Joint Committee may have failed to agree and which has been referred to the Divisional Committee by a Local Joint Committee.

A Divisional Committee is to be established in each division of the Executive for each of the three groups of grades, and each committee will have joint secretaries.

If the Divisional Committees cannot determine any matter falling within their scope, they must, at the request of a majority of either the Executive representatives or the union representatives, refer the difference to the appropriate National Committee for determination, and any decision or agreement made by that National Committee is binding upon the Executive, the unions, and their members.

Local Joint Committees

(*a*) To ensure for the staff of the Executive greater responsibility for the conditions in which their work is carried on.

(*b*) To secure the greatest possible measure of agreement between the Executive and the representatives of: (*i*) operating and ancillary; (*ii*) maintenance and repair; and (*iii*) administrative, professional, technical, supervisory and clerical grades, with basic rates up to £630 a year; and to ensure that conditions of employment agreed on are observed by the Executive and the staff within their sphere.

(*c*) To deal with matters arising out of the application of the terms and conditions of employment mentioned in (*b*) above, including (*i*) working hours, breaks, time recordings, duty schedules, shift rotas, and overtime working; (*ii*) payment of wages (form of pay ticket and the time and method of payment); (*iii*) arrangements for holidays; and (*iv*) settlement of internal grievances, provided that the Committee does not have power to negotiate terms and conditions of employment.

(*d*) To arrange for the exhibition of rules made from time to time by the Committee on appropriate notice boards.

(*e*) To receive and give effect to such rules as may be issued by the Executive relating to the functions of the Committees.

(*f*) To inquire into any difference referred to them by the Executive representatives or the grade representatives in relation to the application of the terms and conditions of employment referred to in (*b*) above, and in connection therewith: (*i*) to investigate the full facts as affecting all parties; (*ii*) to make and communicate to the parties the recommendations of the Committee; (*iii*) to use all available means of settling the difference; and (*iv*) to refer the difference to the appropriate Divisional Committee at the request of a majority of either the Executive representatives or the grade representatives.

(*g*) To ensure that an employee who desires to discuss a grievance, discusses his grievance, in the first instance with the appropriate officer of the Executive, accompanied (if he so desires) by his grade representative.

Local Joint Committees are to be established for each of the three groups of grades, the spheres of operation of the Committees being defined by the appropriate Divisional Committees in accordance with clause (*e*) of the functions of the Divisional Committees. Each Local Joint Committee will consist (*a*) of representatives appointed by the Executive, and (*b*) of grade representatives within the sphere of operation of the Committee. The number of representatives to be appointed by the Executive and the number of representatives to be elected by the staff are to be determined by the Divisional Committees from time to time.

Provision is made for joint secretaries for each Local Joint Committee, one to be nominated by either side.

Election of grade representatives is to be by ballot conducted in accordance with the regulations of the National Council. Every candidate for election as a grade representative and every member of the staff entitled to vote in the ballot for the election of the grade representatives must be 18 years old and have been in the service of the Executive (or its predecessors) for the period of six months immediately preceding the ballot. No member of the staff shall be eligible unless he is a member of a union which is a party to the agreement.

If the Committee cannot agree on any matter falling within its scope it must, at the request of a majority of either the Executive Representatives or the grade representatives, refer the difference to the Divisional Committees.

A summary of the negotiating machinery of British Railways appeared in *The Railway Gazette*, June 24 issue.

Staff & Labour Matters

T.U.C. Wages Policy

The meeting at York on November 10 of the Confederation of Shipbuilding & Engineering Unions expressed determination to press the claim for a £1 increase for all adult male workers, and to ask for a conference with the employers to discuss the position. The employers had requested the men to defer their claim, which, they said, was impossible to reconcile with equity or the national interest. The executive council of the Confederation on November 10 passed a resolution deploring the action of the employers in breaking away from the traditional practice of a meeting between the two parties to ensure mutual understanding on the issues. Exception was taken to the Engineering & Allied Employers' National Federation enlisting support through the press before the claim had been discussed by the parties.

Meanwhile, the General Council of the T.U.C. has been trying to formulate a policy for the affiliated unions regarding cost of living, sliding-scale agreements, and wage claims in general. The council on November 9 considered the report of its special economic committee, which had spent some time trying to frame a wages policy which would at the same time be acceptable to the unions and not conflict with Government views. It is understood that the General Council approved certain principles, but these will not be communicated to the unions concerned until after they have been made known to the Government.

On November 14, a T.U.C. deputation met Mr. Ernest Bevin, Mr. Aneurin Bevan, Sir Stafford Cripps, and Mr. Isaacs, to discuss post-devaluation wages policy. They discussed the wages proposals and the wider economic issues involved. After this meeting with the Ministers, the T.U.C. issued the following statement:

"Consultations took place today between Ministers and the special economic committee of the T.U.C. General Council on a number of questions arising out of the present economic emergency. Discussion was mainly concerned with the action that could be taken to ensure the success of the efforts required to avoid the dangers of inflation, to protect standards, and maintain full employment. Problems which have emerged in the course of the T.U.C. consideration of trade union wages policy were fully examined in the conversation with the Ministers.

"The special committee considered it advisable, in view of its own tentative proposals and in the light of these discussions with Ministers, to urge all unions concerned with present wages claims to postpone negotiations until the General Council has made a full statement on the whole situation."

Automatic Luggage Lockers

The London Midland Region, British Railways, has introduced self-operated automatic luggage lockers at Euston station. By placing 6d. in the slot the passenger will obtain an individual key to a private locker in which he can deposit his small luggage on arrival and collect it within 24 hr. If he is unable to collect it within that time, it will be obtainable at the left luggage office. The lockers are 18 in. high, 16¼ in. wide, and 2 ft. 5 in. deep inside, and will hold a medium-sized suitcase or small umbrella.

The lockers were made by Brecknell, Munro & Rogers Limited, Bristol, to the order of the London Midland Region, which has collaborated in the design. Built in units of eight compartments, lockers are arranged in two vertical columns of four, with a centre panel between the columns carrying the locks and release mechanism. Each compartment has a hinged door with an individual lock. Locks are of Yale type, and the key is normally captive in the lock and the door free to open.

Each time the locker is used a small counter, visible through a window on the front, records the operation, and it is thus possible to check the length of time it has been in use. A person wishing to use a locker has only to find one that has a key in the lock showing that it is not in use. Having unlocked the door, the key again becomes captive, ready for the next person to use. Lock barrels are removable and may be exchanged for other barrels having different keys. Thus it can be seen if anyone has kept in use a locker over the stipulated time, in which case the lock is changed.

The new facility was inaugurated on November 14 by Mr. G. L. Darbyshire, Chief Regional Officer, London Midland Region. Introducing Mr. Darbyshire, Mr. A. E. Hammett, Commercial Superintendent, said that although lockers of varying sizes were in use in the U.S.A., their introduction in their present size in this country was only in the experimental stage. Mr. Darbyshire then opened the first automatic locker. The following officials of the London Midland Region were amongst those present.: Messrs. E. S. Hunt, Assistant Chief Regional Officer; J. W. Watkins, Operating Superintendent; S. A. Fitch, Assistant Operating Superintendent; George Dow, Public Relations & Publicity Officer; L. W. Cox, District Operating Superintendent, London (Western); and H. S. Turrell, Stationmaster, Euston.

Questions in Parliament

Railway Warrants for Servicemen

Mr. N. J. Hulbert (Stockport—C.) on October 26 asked the Minister of Defence how many free railway warrants were issued to National Service men per year.

Mr. A. V. Alexander (Minister of Defence): National Service men called up before January 1, 1949, are entitled to a maximum of three free warrants a year; those called up on or after that date are entitled to a maximum of three during their 18-month period of whole-time service.

Argentine Outstanding Debts

Sir Arnold Gridley (Stockport—C.) on November 15 asked the President of the Board of Trade whether he was aware that the debts outstanding in respect of locomotives, rolling stock and other railway engineering materials delivered to Argentina now amounted to nearly £2,000,000, and had been outstanding for a considerable period, some for nearly 12 months; and what action had been taken by His Majesty's Government to bring pressure to bear on the Argentine Government to implement its undertaking given at the time of the Anglo-Argentine Trade Agreement last June to clear off outstanding payments without exchange loss, and with what results.

Mr. A. G. Bottomley (Secretary for Overseas Trade), in a written answer, stated: Yes, Sir. This matter has constantly formed the subject of representations to the Argentine Government, and is one of the many issues arising out of the Trade Agreement of last June which is now under discussion in Buenos Aires. Some payments were transferred in the July-August period, and I understand that the Argentine authorities now propose to transfer a more substantial sum forthwith against these arrears.

Sir Arnold Gridley on November 15 also asked the President of the Board of Trade whether he was aware that certain firms, in compliance with the express wishes of His Majesty's Government, had gone out of their way to obtain orders from Argentina, thereby losing other orders to foreign competitors; and whether His Majesty's Government would accordingly relieve firms

Mr. G. L. Darbyshire, Chief Regional Officer, L.M.R., opening the first luggage locker at Euston

of their financial burden pending settlement by the Argentine Government.

Mr. A. G. Bottomley stated in a written answer: His Majesty's Government has been most gratified at the response shown by United Kingdom exporters in the attention which they have devoted to the Argentine market, and it will do all it can to secure the satisfactory operation of the Anglo-Argentine Trade Agreement of June last. His Majesty's Government has no powers to assume financial responsibility of the kind suggested by Sir Arnold Gridley. I assume, however, that the exporters concerned were aware of the insurance facilities afforded by the Export Credits Guarantee Department.

Notes and News

Spanish Tourist Office in London.—The Spanish Tourist Office has been opened at 70, Jermyn Street, S.W.1.

Inspector for Steel Wagons Required.—Consulting engineers require qualified inspector for steel wagons being manufactured in Birmingham. See Official Notices on page 603.

London Transport Executive.—Applications are invited for a post in the department of the Chief Technical Planning & Supplies Officer. Candidates should have had a wide experience of mechanical engineering and should possess good analytical and selective faculties. See Official Notices on page 603.

Egyptian Delta Light Railways.—The Egyptian Delta Light Railways has stated that Coupon 104 of the 5 per cent. Debentures due on October 1, was paid subject to deduction of Egyptian income tax of 12 per cent. The Board has now decided to pay this coupon without deduction of this tax.

Hackbridge & Hewittic.—The directors of the Hackbridge & Hewittic Electric Co. Ltd. announce that a recent offer of 200,000 ordinary shares of 5s. each at par has been subscribed to the extent of 197,192 shares. The balance of shares has been allotted to Anglo-Scottish Amalgamated Corporation Limited, who underwrote the issue free of commission.

Weekend Spurt Puts 7,000 More Wagons in Service.—By working Saturday afternoons and Sundays during the last three weekends the staff of the London Midland Region have repaired over 7,000 wagons and put them back into traffic. In the course of these weekend spurts heavy repairs were made to 325 vehicles in the wagon shops at Bromsgrove, Derby, and Earlestown, while other depots carried out light repairs to 6,690.

Reunion of 153 Railway Operating Company.—The first reunion of 153 (1939) Railway Operating Company, R.E., Old Comrades Association, was held recently at the Crown Hotel, Newcastle-on-Tyne. There were 75 members present, including Lt.-Colonel H. F. Sanderson, Assistant Commercial Superintendent, North Eastern Region, who was in the chair, Colonel F. H. Petty, Regional Motive Power Superintendent, Major S. A. Finnis, now the Docks Manager, Humber ports, Docks & Inland Waterways Executive, and Lt.-Colonel J. Blundell, District Motive Power Superintendent, Peterborough, Eastern Region. The secretarial duties were in the hands of Mr. E. M. Warhurst, Forth Goods Station, Newcastle. The unit was recruited before the war entirely from the L.N.E.R., and saw service in many theatres.

State Control of Buses Opposed.—A resolution that the nationalisation of road passenger transport was contrary to the public interest was passed unanimously by a special conference of the National Union of Ratepayers' Associations and Local Government League in London on November 8. The resolution also expressed determination to resist any proposals involving the confiscation of valuable municipal assets and the complete abolition of local control regarding fares.

Formation of Metropolitan Vickers-Beyer Peacock Company.—A new private company, Metropolitan Vickers-Beyer Peacock, is a joint enterprise of the Metropolitan-Vickers Electrical Co. Ltd. and Beyer Peacock & Co. Ltd. The new firm has a capital of £280,000 in 150,000 6 per cent. £1 redeemable cumulative preference shares and 13,000 £1 ordinary shares. Metropolitan-Vickers is now building a gas-turbine locomotive for British Railways, ordered by the then Great Western Railway in 1946, and described in *The Railway Gazette* January 24, 1947, and January 14, 1949, issues.

Instructions to Road Haulage Drivers.—The Road Haulage Executive stated on November 12 that it had given orders for the withdrawal of the instruction issued locally to drivers in its western division to which exception was taken at Monmouthshire Assizes. At the Assizes on November 11 a driver had said that he and other drivers had been instructed not to make statements to the police about accidents and the letter of instruction was described by Mr. Justice Finnemore as a "most improper" document. In future the R.H.E. will issue standard instructions worded in conformity with the generally accepted practice and states that it does not consider itself to be in a privileged position.

Stewarts and Lloyds at Olympia.—The International Building Trades Exhibition, which, as was recorded in our issue of October 28, is being held at Olympia until December 1, includes an exhibit by Stewarts and Lloyds Limited, showing two bays of Universal tubular-framed building; brass foundry products of John Russell & Co. Ltd.; screwed and socketed steel tubes and screwed fittings; a new type of handrailing; a selection of gas, water, and steam joints; and other tubular steel products.

L.M.R. Out-of-Gauge Loads.—During the last 12 months 7,557 out-of-gauge and exceptional loads were hauled by the London Midland Region of British Railways. Among these have been railway coaches for Egypt, South Africa, Ceylon, and Nigeria, locomotives for Ireland, and large pieces of machinery and specially constructed wagons for various parts of the world. Many of these exceptional loads have called for the removal of signals, crossing gates, lamps, and huts, blocking of adjoining lines, and in some cases even widening of cuttings.

Loudspeaker Communication for Mechanised Marshalling Yard.—Operations in the up marshalling yard at Toton, in the London Midland Region, where, as was reported in our issue of October 28, the first stage of mechanisation has just been completed, will be assisted by an extensive loudspeaker intercommunication system. Communication will be provided between the control tower, hump room, yard inspector's and foreman's offices, certain signal boxes, and staff on the ground at key points. Outside microphones will

British Railways Exhibits in Lord Mayor's Show

The full-size model of Stephenson's "Rocket," followed by exhibits representing modern British Railways locomotives, which formed the rail section in the pageant depicting transport through the ages in this year's Lord Mayor's Show, held in London on November 9 (see paragraph in our last week's issue)

OFFICIAL NOTICES

None of the vacancies on this page relates to a man between the ages of 18 and 50, inclusive, or a woman between the ages of 18 and 40, inclusive, unless he, or she, is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

STATION DESIGN. A striking example of modern British practice at the important wayside station of Luton. Reprinted from *The Railway Gazette*, July 7, 1944. Price 1*s*. Post free 1*s*. 2*d*. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

STANDARD MILITARY RAILWAY BRIDGES. By F. S. Bond. A description of the different types of bridges designed for rapid erection in the field by the Allied Forces, and of the various methods employed in such erection. 28 pages. 9 in. by 12 in. fully illustrated. Paper cover. 5*s*. By post 5*s*. 2*d*. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

LONDON TRANSPORT EXECUTIVE. Applications are invited for a post in the Department of the Chief Technical Planning & Supplies Officer. The duties of the post are in connection with a systematic review and standardisation of materials and components in use throughout the Executive. Applicants should have had a wide experience of mechanical engineering and should possess good analytical and selective faculties and be able to conduct surveys of material usage, assemble and collate data and prepare reports. A knowledge of electrical engineering would be an advantage. Salary in the range of £600-£775 per annum according to experience and qualifications. The appointment is subject to a medical examination. Canvassing directly or indirectly will disqualify. Applications giving full particulars of age, experience and qualifications should be sent within 14 days of appearance of this advertisement to the STAFF OFFICER (F/EV 110), LONDON TRANSPORT EXECUTIVE, 55, Broadway, Westminster, S.W.1. For acknowledgment enclose addressed envelope.

CONSULTING ENGINEERS require qualified Inspector for steel wagons being manufactured in Birmingham. Applicants should state age, experience, and salary required. Resident at makers' works.—Box 943, c/o DAWSON'S, 129, Cannon Street, E.C.4.

THE WORK OF THE RAILWAY CLEARING HOUSE, 1842-1942. An account of the development and extent of the activities of this famous British railway institution. Paper. 9¼ in. by 6 in. 24 pp. Illustrations. 2*s*. 6*d*. By post 2*s*. 8*d*. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

RAILWAY MAINTENANCE PROBLEMS. By H. A. Hull (late District Engineer, L.M.S.R.). Valuable information. With much sound advice upon the upkeep of permanent way. Cloth. 8¼ in. by 5¼ in. 82 pp. Diagrams. 5*s*. By post 5*s*. 3*d*. *The Railway Gazette*, 33, Tothill Street, Loudon, S.W.1.

enable the ground staff to acknowledge orders or pass information to the controlling authority. The equipment has been supplied by the General Electric Co. Ltd., and installed by the staff of the Signal & Telecommunications Engineer, L.M.R.

Liverpool Overhead Traffics.—Following successive decreases during October, Liverpool Overhead Railway traffics were £4,009 below last year's aggregate of £120,910, at October 30. The largest setback was in the week ended October 23, when receipts were down by £562, at £2,372, though the position improved in the following week, with traffics at £2,523, only £197 below those for the equivalent period of 1948.

Train Services Interrupted by Fog.—Train working on the London Midland Region was retarded by widespread fog from London to the Midlands and in Manchester on November 15, and by dense fog in London the next morning. Fog was very dense throughout the Eastern Region on November 15 and fog services operated on the Great Central & Great Northern Suburban lines in the afternoon and evening. On the morning of November 16, thick fog in the London area and East Anglia necessitated the running of fog services in a number of districts. Fog prevailed throughout the day and night of November 15 in the Southern Region London Suburban area; the running of both passenger and freight trains was again affected the following morning. The same conditions in the Western Region London and Midland divisions retarded train working and fog services were run in the London suburban area in the afternoon and evening of November 15 and the morning of November 16.

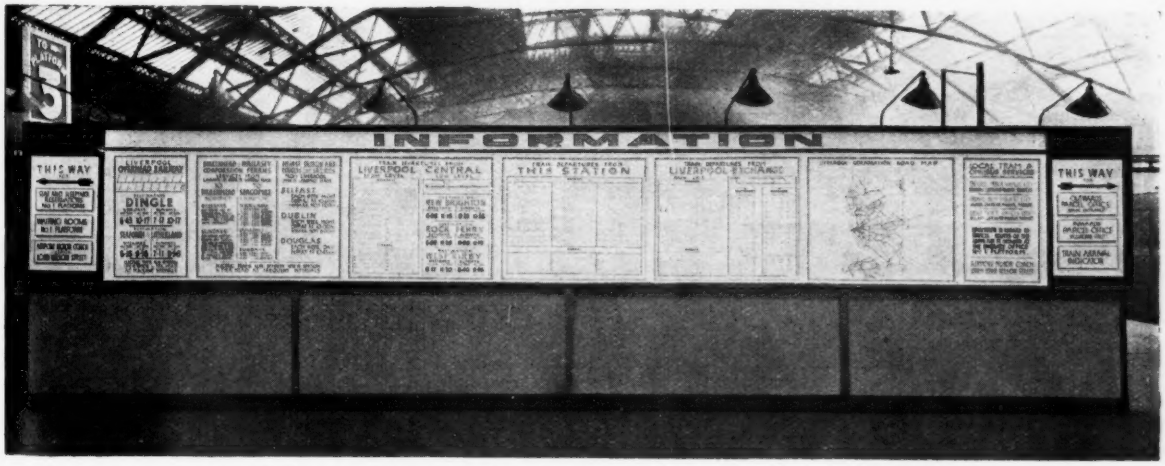
Locomotives for Calcutta.—The Hunslet Engine Co. Ltd. has received from the Calcutta Port Commissioners a third order for six broad-gauge 65-ton 0-6-2T locomotives for handling trains up to 1,200 tons in weight. These have been designed specially for Calcutta Docks. Six such locomotives have been operating successfully for about five years and another six are already under construction at the Hunslet works.

Carry On Music Hall.—Mr. Jack Warner, the stage, screen, and radio star, was guest artist in the latest edition of "Carry On Music Hall," presented and produced by the editor of the L.M.R. staff magazine, in aid of St. Pancras N.U.R. Orphan Fund, at St. Pancras Town Hall on November 15. Mr. Warner rendered some of the songs and monologues that have made him famous and took the opportunity to thank the British Railways staff who had helped him during the production of the recent British film "Train of Events." The programme also included a magician, ventriloquist, violinist, vocalists, comedians, and dancers from all parts of the L.M.R. The piano accompanist for the solos was Mr. George Kirby (Clerk, Euston), and music was provided by Mr. Jim Purchase (Motor Driver, St. Pancras) and his band.

G. A. Harvey & Company at the Building Trades Exhibition.—The firm of G. A. Harvey & Co. Ltd., Greenwich, is exhibiting at the International Building Trades Exhibition now being held at Olympia, London, and which will remain open until December 1. The display includes a zinc and copper roofing exhibit; Harco glazed partitioning and ornamental metalwork; hot-dip galvanised, mild-steel gutters and fittings; galvanised cisterns; sheet-metal ventilators; and other products.

Bassett-Lowke 50th Anniversary.—On Tuesday last a dinner was given at the Savoy Hotel, London, to celebrate the 50th annniversary of the foundation of Bassett-Lowke Limited, the well-known maker of railway, ship, and other models. The guest of honour was Lord Brabazon of Tara, who proposed the toast of Mr. W. J. Bassett-Lowke, founder of the company, and the firm. Mr. Bassett-Lowke responded. Mr. George Holland gave an address on the craft of model making.

Station Improvements at Liverpool Lime Street



Station improvements are in hand at Liverpool Lime Street and the photograph reproduced above shows a temporary information panel erected in the circulating area (see letters to the editor in our September 16 and October 7 issues)

and the toast of the visitors was proposed by Mr. H. M. Sell and responded to by Mr. George Dow. The Chairman was Mr. Cyril Derry.

Parcels Hold-up at Liverpool Street.—Cartage staff at Liverpool Street Station, Eastern Region, on November 11, refused to handle inter-station parcels traffic between Liverpool Street and other London stations, on the ground that, as one of their number had been charged recently with theft, the present method of checking parcels in bulk should be replaced by a record of each parcel, and they themselves should know the extent of their responsibility. Efforts were made by British Railways officials on November 14 to persuade the men to resume normal working, but as they had not done so, the N.U.R. organiser, on November 16, met the men to discuss the matter. Perishable goods were not held up, and other parcels collections and deliveries continued as usual. At the time of going to press no settlement had been reached.

Forthcoming Meetings

November 18 (*Fri.*).—Railway Club, 57, Fetter Lane, London, E.C.4, at 7 p.m. "Railways and Parliament," by Mr. S. C. Hawtrey.

November 18 (*Fri.*).—Carlisle & District Transport Club, at the County Hotel, Carlisle, at 7.30 p.m. "The Canada of Today," by Mr. F. J. Gemmell Smith, Public Relations Representative, Canadian National Railways.

November 21 (*Mon.*).—Institute of Transport, at the Jarvis Hall (R.I.B.A.), 66, Portland Place, London, W.1, at 5.45 p.m. "Some Thoughts on Railway Motive Power," by Sir Eustace Missenden, Chairman, Railway Executive.

November 21 (*Mon.*).—Institute of Traffic Administration, Merseyside Centre, at the Adelphi Hotel, Liverpool, at 7.30 p.m. "Some Aspects of Personnel Management," by Mr. J. W. Fox.

November 23 (*Wed.*).—Institution of Locomotive Engineers, at the Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, at 5.30 p.m. "Locomotive Limits and Fits," by Mr. J. F. Alcock.

November 23 (*Wed.*).—Permanent Way Institution, London Section, at Denison House, Vauxhall Bridge Road, London, S.W.1, at 6.30 p.m. "Lighting of Stations, Depots and Yards," by Mr. R. W. Hunt.

November 23 (*Wed.*).—Belfast Association of Engineers. "Modern Steam Locomotive Practice," by Mr. Brian Reed.

November 24 (*Thu.*).—Road Haulage Association, National Council meeting, at Beaver Hall, Great Trinity Lane, London, E.C.4, at 10.30 a.m.

November 24 (*Thu.*).—Institution of Signal Engineers, at Hunts Bank, Manchester, at 6.45 p.m. "Principles of Interlocking," by Mr. W. H. Such.

November 24 (*Thu.*).—Institute of Transport, Metropolitan Section. Annual dinner at St. Ermin's, Caxton Street, London, S.W.1; 6.45 for 7.15 p.m.

November 25 (*Fri.*).—Institution of Signal Engineers, at the London Transport Executive Signal School, Earls Court Station, London, S.W.5, at 6.15 p.m. "Track Circuits," by Mr. W. H. Challis.

November 26 (*Sat.*).—Railway Students' Association. London School of Economics & Political Science. Visit to railway police school, "St. Cross," Tadworth, Surrey.

Railway Stock Market

Markets have continued to be dominated by British Funds, the heavy decline in which was strongly checked at the end of last week by official support from the Government broker. At the time of going to press, 3½ per cent. War Loan, 2½ per cent. Consols and Treasury Bonds, and 4 per cent. Consols have all held the rally which followed the intervention of official support. As was to be expected, the nationalisation stocks have also rallied, including 3 per cent. Gas at 85¼, despite the coming issue of a further £35,000,000 of this stock for compensation to Gas Light & Coke stockholders. Transport 3 per cent. (1978-88) at 88 also reflected the rally in gilt-edged. The market wonders if there will be further active intervention by the Government broker and if a big "tap" loan is pending as a conversion exchange for holders of 1¾ per cent. Exchequer Bonds, more than half of which is held by Government departments. Recent official intervention may have been only an indication to the market that the Government is prepared to take action to prevent long-dated stocks from going to a higher yield basis than 4 per cent. The rally in gilt-edged has helped other sections, particularly leading industrial shares. Iron and steel shares strengthened now that the Government has agreed to postpone the vesting date for iron and steel until after the General Election.

Business in foreign rails was on a small scale, and absence of buyers made for lower prices. Speculative interest in Leopoldina stocks further declined, holders being impatient at the delay in issuing the share-out plans for the various classes of stock, which is a difficult matter, because of the rights of the different stocks which are further complicated by some large interest arrears outstanding; the purchase money is unlikely to be received from Brazil until early next year. The market hopes that the directors' proposals will be available during the next few weeks. Meanwhile, Leopoldina ordinary has eased to 8¾, the preference stock to 25½, while the 4 per cent. and 6½ per cent. debentures were lower at 87½ and 127 respectively. Leopoldina Terminal 5 per cent. debentures fell sharply to 96; the £1 ordinary units were around 2s. 9d. Elsewhere, Great Western of Brazil £10 ordinary at 135s. 7½d. also turned easier. Brazil Rail gold bonds continued to change hands around 44. San Paulo 10s. units have been around 14s., but there was selling of United of Havana stocks on talk of a hitch in the take-over negotiations, and the 1906 debentures fell back to 25¼. International of Central America 5 per cent. first gold bonds have changed hands at 174. La Guaira & Caracas marked 20, and the 5 per cent. debentures around 68.

There has been business around 85s. in Egyptian Delta bearer warrants. Vera Cruz 4½ per cent. debentures marked 39½. Antofagasta ordinary and preference have been steady at 7½ and 40½ respectively. Central Uruguay ordinary were 10½. Manila "A" debentures transferred around 85 and the preference around 7s. 6d. Mexican Railway 6 per cent. debentures were 42½, and Northern Railway of Mexico 4½ per cent. bonds eased to 17¾.

Apart from B.E.T. deferred stock, which receded to £1,480, movements in the road transport and allied sections were small. Southdown eased to 122s. 6d., but West Riding have been steady at 69s., and Lancashire Transport 79s. 6d. Scottish Motor firmed up to 80s.

The decision to postpone the vesting date helped iron and steel shares, because nationalisation may never be effected. Hadfields at 26s. 6d. moved higher, while United Steel were up to 26s. 6d., Sheepbridge 23s. 3d., and Dorman Long 28s. 6d.; but most gains have not exceeded more than a few pence. Iron and steels on the nationalisation schedule are in most cases substantially below their take-over levels. That for United Steel, for instance, is 30s. 4d., or nearly 4s. higher than the current market price. If nationalisation were effected, the shares would be exchanged into British Steel stock on the basis of their take-over values, and British Steel stock would have to be issued at a price and on terms in line with those ruling in the gilt-edged market at the actual time of the exchange.

Shares of locomotive building and allied companies have been steady, with Vulcan Foundry 18s. 3d., Beyer Peacock 18s. 9d., North British Locomotive 19s. 3d., and Gloucester Wagon 51s., but Wagon Repairs 5s. shares receded to 15s. 6d.

Traffic Table of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1947.48	No. of week	Aggregate traffics to date: Total 1948/49	Aggregate traffics to date: Increase or decrease
South & Central America	Antofagasta... ...	811	6.11.49	£ 72,520	+ £ 19,520	44	£ 2,952,010	+ £ 502,830
	Costa Rica	281	Sept., 1949	30,929	— 3,154	13	102,621	— 8,998
	Dorada	70	Sept., 1949	29,403	+ 1,529	39	265,030	+ 24,545
	Inter. Ctl. Amer. ...	794	Aug., 1949	$1,023,467	+ $26,568	35	$8,601,268	— $568,351
	La Guaira	22¾	Oct., 1949	$91,504	— $18,157	43	$1,058,982	+ $10,465
	Nitrate	382	31.10.49	25,806	+ 12,404	43	384,832	+ 125,836
	Paraguay Cent. ...	274	4.11.49	₲143,687	+ ₲51,085	18	₲2,597,612	+ ₲780,685
	Peru Corp. ...	1,059	Aug., 1949	246,670	+ 74,521	9	473,214	+ 122,033
	Salvador	100	Aug., 1949	c$1,000	+ c 1,000	9	c173,000	+ c8,000
	Taltal	154	Oct., 1949	15,870	+ 7,900	18	45,070	+ 13,340
	United of Havana ...	1,301	11.6.49	$231,311	+ $14,746	49	$13,733,928	— $4,659,951
Canada	Canadian National †	23,473	Sept., 1949	14,914,000	+ 299,666	39	121,848,000	+ 3,665,333
	Canadian Pacific †...	17,037	Sept., 1949	10,784,666	— 548,333	39	89,239,000	+ 4,043,333
Various	Barsi Light* ...	167	Sept., 1949	23,640	+ 3,285	25	179,107	+ 24,015
	Egyptian Delta ...	607	30.9.49	18,220	— 991	26	326,967	— 1,764
	Gold Coast ...	536	Sept., 1949	205,654	+ 39,977	27	1,398,009	+ 213,885
	Mid. of W.Australia	277	Sept., 1949	31,775	+ 2,186	13	81,475	— 771
	Nigeria	1,900	Aug., 1949	445,009	+ 41,464	21	2,218,110	+ 12,405
	South Africa ...	13,347	22.10.49	1,489,721	+ 146,797	29	43,490,451	+ 4,541,630
	Victoria	4,744	July, 1949	987,736	— 320,973	4	—	—

* Receipts are calculated @ 1s. 6d. to the rupee † Calculated at 83 to £1